DOCUMENT RESUME

ED 269 553	CE 042 763
TITLE	Proceedings of the Annual Adult Education Research Conference (24th, Montreal, Quebec, April 8-10, 1983).
INSTITUTION	Concordia Univ., Montreal (Quebec).; Montreal Univ. (Quebec).
PUB DATE	83
NOTE	289p.
PUB TYPE	Collected Works - Conference Proceedings (021) -- Reports - Research/Technical (143)
EDRS PRICE	MF01/PC12 Plus Postage.
DESCRIPTORS	Adult Basic Education; Adult Development; *Adult Education; *Adult Learning; Distance Education; *Educational Research; *English (Second Language); Futures (of Society); High School Equivalency Programs; Independent Study; Labor Force Development; Literacy Education; Needs Assessment; *Research Methodology; *Second Language Learning

ABSTRACT

These proceedings contain 46 papers. Brief English-language titles include: "Some Research Findings on Study Methods in Adult Distance Education" (Bajtelsmit); "Self Planned Professional Learning among Public School Adult Education Directors" (Beder, et al.); "Participation in Study Circles and the Creation of Analysis" (Beder, et al.); "Participation in Study Circles and the Creation of Individual Resources" (Borgstrom, Olofsson); "An Adult Basic Education Oriented Form of the Education Participation Scale" (Boshier); "Purposes of Adult Education" (Boshier, Nickerson); "Methodolatory in Adult Education Research" (Brookfield); "The Perry Scheme: A New Perspective on Adult Learners" (Cameron); "Adult Acquisition of Formal Operations" (Charuhas); "Beyond 1984: Projecting Participation in Adult Education" (Chimene); "The Educational Orientation Scale" (Clemmer); "Principles of Adult Learning Scale" (Conti); "Determinants of Adult Education Participation of Low Income Adults" (Cookson); "Organizing Packinghouse Workers in Chicago, 1937-1943" (Davenport); "Educational Potential of Interactive Video Technology" (Deshler, Gay); "A Case for the Liberal Arts" (Duguid); "New Test for Brain Hemisphere Preference" (Even, Lux); "Personality Traits and Perceived Benefit Associated with Different Approaches of Medical Students to Self-Directed Learning Projects" (Fox, West); "Images of Interdependence: Meaning and Movement in Learning/Teaching" (Griffith); "Democratization of the Knowledge Production in Adult Education" (Hoghielm); "The Relevance of the Future in Adult Education" (Ilsley); "An Analysis of Perceptions of the Practices of Adult Educators from Five Different Settings" (James); "Retirees Who Are Positive Give Advice to Those Who Are Negative" (Kreitlow, Kreitlow); "An Evaluation Model for an Intervention in a Community Hospital" (Lawler); "Manpower Training and Disadvantaged Adults" (Lawrence); "A Detailed Analysis of GED Examinee and High School Senior Performance on the Tests of General Educational Development" (Malizio, Whitney); "Use and Utility of Information Channels for Self-Help Advocacy Groups" (McCreary); "Culture, Cognition, and Adult Second-Language Literacy" (Orem); "Institution-related Motivational Predictors of the Penchant for Learning in the Natural Societal

Setting" (Pipke); "Philosophies of Adult Education and American Values" (Podeschi); "Adult Development and Adult Beginning Reading Behaviors" (Schumacher); "Qualitative Differences between Field Dependent Nursing Students' Perceptions of Learning Experiences and Learning Patterns" (Simpson, Walker); "Correlating Ego Identity Development with Cognitive Processes Used in Question Formation" (Smith); "Needs Assessment in Adult Education" (Sork); "A Phenomenology of the Will to Learn" (Stanage); "A Power-Analytic Investigation of Research in Adult Education, 1970-1982" (West); and "Adult Education Faculty Characteristics, Activities, Satisfactions, and Career Attitudes" (Willie, et al.). (YLB)

****
*   Reproductions supplied by EDRS are the best that can be made   *
*   from the original document.   *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

G Conti

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

PROCEEDINGS
OF THE
TWENTY-FOURTH ANNUAL
ADULT EDUCATION RESEARCH CONFERENCE

Ron Cervero, Northern Illinois University
Michael Collins, University of Saskatchewan
Mary Jane Even, University of Nebraska, Lincoln
Nevin Robbins, Shelby State Community College, Memphis

in cooperation with

Concordia University, Adult Education Program
And Centre for Continuing Education

Université de Montréal Faculté des Sciences de l'Education, Andragogie
et Faculté de l'Education Permanente

Cover design: Jennifer Blachford

April 8-10, 1983

Montréal, Québec

TABLE OF CONTENTS

	Papers Presented	Page
Bajtelsmit, John W.	"Some Research Findings on Study Methods in Adult Distance Education"	1
Beder, Hal Darkenwald, Gordon & Valentine, Thomas	"Self Planned Professional Learning Among Public School Adult Education Directors: A Social Network Analysis"	7
Borgstrom, Lena & Olofsson, Lars-Erik	"Participation in Study Circles and the Creation of Individual Resources	13
Boshier, Roger	"An Adult Basic Education Oriented Form of the Education Participation Scale"	20
Boshier, Roger & Nickerson, Veronica	"Purposes of Adult Education: An Instrument and Model"	26
Brookfield, Stephen	"Methodolatory in Adult Education Research: Straw Men and False Dichotomies"	32
Cameron, Susan W	"The Perry Scheme: A New Perspective on Adult Learners"	38
Charuhas, Mary S.	"Adult Acquisition of Formal Operations"	44
Chimene, Davice G.	"Beyond 1984: Projecting Participation in Adult Education"	51
Clemmer, William Michael	"The Educational Orientation Scale"	57
Conti, Gary J.	"Principles of Adult Learning Scale: Follow-up and Factor Analysis"	63
Cookson, Peter S.	"Determinants of Adult Education Participation of Low Income Adults"	69
Davenport, Sue	"Organizing Packinghouse Workers in Chicago, 1937-1943"	75
Deshler, David & Gay, Geri	"Educational Potential of Interactive Video Technology: An Evaluation of a Pilot Project"	81
Duguid, Stephen	"A Case for the Liberal Arts"	87
Even, Mary Jane & Lux, Terese	"New Test for Brain Hemisphere Preference: Implications for In-Class Procedures and Instructional Techniques"	93

	Papers Presented (continued)	Page	
Fox, Robert D. & West, Russell F.	"Personality Traits and Perceived Benefit Associated with Different Approaches of Medical Students to Self-Directed Learning Projects"	99	
Griffith, Gwyn	"Images of Interdependence: Meaning and Movement in Learning/Teaching"	105	
Hoghielm, Robert	"Democratization of the Knowledge Production in Adult Education — Some experiences from the Swedish Experiment"	111	
Hurteau, Marthe	"Une approche évaluative andragogique"	119	
Ilsley, Paul J.	"The Relevance of the Future in Adult Education: A Phenomenological Analysis of Images of the Future"	124	
James, Waynne B.	"An Analysis of Perceptions of the Practices of Adult Educators from Five Different Settings"	130	
Kreitlow, Burton & Doris	"Retirees Who Are Positive Give Advice to Those Who Are Negative: Implications for Adult Educators"	136	
Lawler, Therese G.	"An Evaluation Model for an Intervention in a Community Hospital"	142	
Lawrence, Janet H.	"Manpower Training and Disadvantaged Adults: An Assessment of Participants' Economic and Social Development"	148	
Malizio, Andrew & Whitney, Douglas R.	"A Detailed Analysis of GED Examinee and High School Senior Performance on the Tests of General Educational Development"	154	
McCreary, Elaine K.	"Use and Utility of Information Channels for Self-help Advocacy Groups"	161	
Orem, Richard A.	"Culture, Cognition, and Adult Second-Language Literacy"	167	167
Paquet, Pierre	"Les Pratiques de formation en entreprises au Québec"	173	173
Pipke, Ingrid	"Institution-related Motivational Predictors of the Penchant for Learning in the Natural Societal Setting"	181	181

	Papers Presented (continued)	Page
Podeschi, Ronald L.	"Philosophies of Adult Education and American Values"	187
Riverin-Simard, Danielle	"Développement vocationnel de l'adulte: cycles de vie au fil des âges"	193
Schumacher, Sally	"Adult Development and Adult Beginning Reading Behaviors"	199
Simpson, Edwin L. & Walker, Susan Noble	"Qualitative Differences Between Field Dependent Nursing Students' Perceptions of Learning Experiences and Learning Patterns"	205
Smith, Mark	"Correlating Ego Identity Development with Cognitive Processes Used in Question Formation"	211
Sork, Thomas J.	"Needs Assessment in Adult Education: A Critical Analysis of the Literature through 1981"	217
Stanage, Sherman M.	"A Phenomenology of the Will to Learn: An Investigation Toward Research into Essential Structures in Adult Education"	223
Tremblay, Nicole	"L'aide à l'apprentissage chez les autodidactes"	231
West, Russell F.	"A Power-Analytic Investigation of Research in Adult Education, 1970-1982"	237
Willie, Reynold Copeland, Harlan & Williams, Howard	"Adult Education Faculty Characteristics, Activities, Satisfactions and Career Attitudes"	243

Alternate Paper

Kasworm, Carol E. & Medina, Rene	"A Study of the Relationship between APL Performance Indicators and Age Cohorts"	249

	Symposia Presented	Page
Kiener, Mary Elaine (Chair) Cunningham, Phyllis Davenport, Suzanne	"Gender, Knowledge and Power in Adult Education: A Participatory Research Project"	255
Merriam, Sharan B. (Chair) Beder, Harold Ewert, Merrill Jones, Edward	"The Use of Ethnography, Case Study, and Grounded Theory in Adult Education Research"	261
Niemi, John A. (Chair) Dicks, Dennis Houlihan, James Memmott, James R.	"Human Resource Development: Models for Decision Making by Workers, Management, and Government"	267
Orem, Richard A. (Chair) Hautecoeur, Jean-Paul Mastai, Judith Orem, Richard A.	"Adult Language Learning: Needed Research for Adult Educators"	271
Touchette, Claude (Chair) Beder, Hal Carria, Natalino Rubenson, Kjell	"From Beliefs to Knowledge about the Teaching of Adults"	276

Some Research Findings On Study Methods in Adult Distance Education

John W. Bajtelsmit
The American College*

INTRODUCTION

The purpose of this paper is to review five research studies which examined different study methods used by adult learners. The setting was a professional certification program based on education at a distance. These studies examined the nature and variety of educational resources and study methods used, and how student characteristics interact with these contextual variables in producing differential academic achievement. Study 1 describes a survey designed to determine what materials, resources, and study methods students used in preparing for their examinations. The frequency of this usage, changes in usage patterns over time, amount and distribution of preparation time, and evaluative ratings were the focus of this research. Study 2 investigated the relationship between academic achievement as measured by scores on the standardized national course examinations, educational resources used, and student characteristics. The third study explored in more depth the two most popular study methods--formal class and independent self-study--and compared exam performance at various levels of educational background. Study 4, another aptitude by treatment interaction investigation, examined the effectiveness of formal class and self-study methods for students at different levels of test anxiety. Study 5 explored the relationship between study method and performance on different examination formats. These studies yielded several interesting interactions which will be discussed shortly.

All five studies were conducted with students of The American College. This institution is a specialized, private, nonprofit, accredited, degree-granting college offering education in the financial services. The programs are created by a resident faculty located on its campus in Bryn Mawr, Pennsylvania. Students enrolled in The American College's curriculum number some 60,000 men and women and reside in all fifty states, the District of Columbia, and twenty-five foreign countries. Students may pursue their course work through independent study or by participation in organized classes in their local communities. Most courses include an achievement test prepared and graded in Bryn Mawr. The tests are administered at some 300 college and university examination centers throughout the United States and abroad.

Study 1

The primary objective of this study was to determine which resources students used in preparing for the CLU professional designation examinations. A survey was administered to 500 randomly selected registrants and netted a 75% response rate. The 375 respondents provided information concerning study aids and study methods currently used, as well as anticipated methods and aids for future exams. This survey revealed that a wide variety of educational resources were utilized by the students. Well over a dozen study aids were found to be commonly available. These included the textbooks suggested for the course, various study guide materials and related review books, audio-cassette review programs, class lecture notes, self-study review cassette tapes, and a number of review and practice tests. The most frequently cited study aids included The American College Study Guide, used by

---

*270 Bryn Mawr Avenue, Bryn Mawr, Pennsylvania 19010

91% of the students and the suggested course textbooks, used by 77% of the students. A surprising finding of this study was the large availability and reliance on study aids neither produced nor endorsed by The American College. Of particular interest to The American College were present usage patterns crosstabulated with projected future usage of the available study aids.

In addition to study aids, various study methods were also identified. It was found that most students (69%) relied on independent self-study (no class or group) as their means of preparation for their examination. The next most frequently mentioned method was formal class (26%). These two primary study methods will be discussed further in the studies that follow. The amount of preparation time typically averaged a little over three hours per week for each course. The distribution of student preparation time shows a large positive skew. The mean number of total hours was 71.6. Dividing this by 17 weeks yields 4.2 hours per week. The mode, was 50 hours total, or 2.9 hours per week. The mid-point of the distribution, or median, was 59.6 total, or 3.5 hours per week. There was considerable variability in how students allocated this preparation time within the semester. The data indicate that a great deal of the studying is concentrated within six weeks of the examination date.

Study 2

This was an investigation of the relationship between academic achievement as measured by scores on standardized national course examinations, educational resources used to study, and student characteristics. Because of the sensitive nature of these data and the limitations inherent in a correlational study, the data on aids and methods not endorsed by The American College will not be discussed here. Of primary interest was the relationship between study method and examination performance. Analysis of exam performance indicated very minor differences between study methods. Noted differences were generally within the range of the standard error of measurement for the examination. In short, the overall comparisons of study methods indicated no practical differences in terms of their effect on academic achievement. It should be noted, however, that academic achievement in this study was defined as examination performance. It is possible that the study methods may have had differential effects on persistence in the academic programs. This line of research is currently being pursued.

Study 3

The studies discussed thus far have been consistent with the research on teaching, which has typically searched for methods that help all students (see, e.g., Dunkin & Biddle, 1974). The recent literature, however, indicates that student differences in aptitude often determine the effectiveness of instruction (Cronbach & Snow, 1977). An aptitude X treatment interaction (ATI) approach suggests that some students perform better under one instructional method, while other students perform better with another method. The present study investigated the relationship of educational background to the effectiveness of two different instructional methods. These methods were the ones found to be most frequently used by American College students.

Subjects were 1,000 randomly selected students taking the exam for the first course in the CLU curriculum. The preliminary descriptive analysis of the study method variable indicated that 89.2% of the students engaged in either formal class (56.0%) or self-study (33.2%). The remaining study methods were eliminated from subsequent analyses. The highest level of previous education was classified into four categories: 1) high school (10.4%), 2) some college (28.2%), 3) college graduate (51.4%), and 4) LLB, JD, MA, PHD (10.0%). Data from two consecutive years were used.

Using the first year's data, a crosstabulation of study method by educational level resulted in a significant chi-square test, suggesting that as educational level increases so does the proportion of students who self-study. The second year's data, however, failed to support this conclusion. Study method was also crosstabulated with pass/fail status. For both years the chi-square tests corrected for continuity were not significant ($p > .05$). This tentatively suggested that the proportion of passers (or failers) was not dependent on study method, i.e., 69.6% of the formal class students were passers, compared with 69.7% of the self-studiers. Next, educational level was crosstabulated by pass/fail status. Chi-square tests of independence were significant ($p < .001$). These data indicate that as educational level increases so does the percentage of passing students. The percentage of passers increased from 45.8% in the high school level to almost double that percentage (84.8%) for students with advanced degrees. These analyses indicate that a direct relationship exists between educational level and pass/fail status.

A subsequent analysis indicated that the earlier finding of no differential efficacy of study method on pass/fail status may not hold across all educational levels. Specifically, high school level self-studiers seem to be disproportionately populated with failers. While half of the high school level students in formal classes were passers, less than 25% of the high school self-studiers were passers. Although the analyses of pass/fail data dealt with the ultimate performance criteria from the students' point of view, actual exam scores contain more precise information and may be more sensitive to the possible differential effects of study methods and educational levels. Consequently, the relationships among educational level, study method, and CLU exam scores were investigated by means of an analysis of covariance procedure using a multiple-regression approach. Such an analysis has greater power and therefore increases the likelihood of detecting significant differences among the different study methods and educational levels. The examination means in the first course in the CLU curriculum for self-studiers and formal class attenders crosstabulated according to educational level are graphically portrayed in Figure 1. The analysis

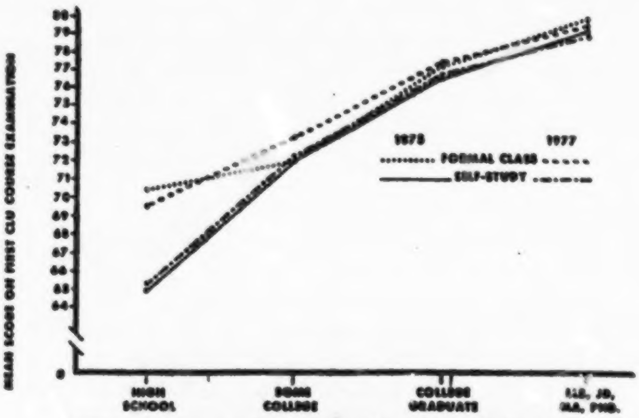


FIGURE 1. Mean scores on the first CLU Examination by new students in 1976 (on CLU-1 exam) and new students in 1977 (on HS 301 exam) according to Study Method and Educational Background.

BEST COPY AVAILABLE

of covariance procedure indicated that educational levels, when adjusted for differences in study methods, were associated with significantly different levels of exam score performance ($p < .001$). An analysis of the effects of study method controlling for the significant effects of educational level indicated no difference between study methods on grades in the first CLU exam. The interaction effect was similarly not significant. In both analyses the study method factor accounted for almost zero variance in the exam scores, whereas educational level accounted for 7.3% to 8.8% of the variance. Hence, both the overall pass/fail analysis as well as the exam score analysis suggest that exam performance is not dependent on study methods for these students.

In summary, this study indicates that educational level is a significant predictor of adult examination performance in this nontraditional setting. It further suggests that study method may be an important factor for high school level students. High school self-studiers not only performed most poorly on the CLU examinations, but were also the only group with a failing examination average. This would suggest that students at lower educational levels may benefit considerably from highly structured study methods and be debilitated when left to their own devices in the context of independent study. It should be noted that the nature of the present investigation was descriptive and correlational. Since students self-selected their study methods, many factors remain uncontrolled and any cause/effect inferences must remain largely speculative. Although the nonexperimental nature of this study prevents cause and effect conclusions, encouraging formal class participation for high school level students appears to be a reasonable guidance strategy. This recommendation warrants further study in view of its potential effectiveness in increasing student achievement and reducing attrition in nontraditional adult learners.

Study 4

As mentioned, the recent literature on teaching indicates that student differences (in aptitude, learning style, etc.) often affects the effectiveness of instruction. Some of the key studies providing support for this position have implicated anxiety as an important student variable that may influence the effectiveness of instruction.

The American College provides a unique setting for the study of the efficacy of instructional methods because of its naturally occurring (vs. laboratory-contrived) differences in study methods. As noted, formal class and self-study, two instructional methods that are considerably different, are each widely used by American College students. In addition, the College is somewhat unusual in that its students are evaluated solely by means of professionally-developed standardized examinations. There is only one examination per course. Because of the importance of passing these examinations, debilitating student reactions to the testing situation may have an acute effect on test performance. This study examined the interaction of study method and anxiety on CLU examination performance.

The sample consisted of 87 CLU students who completed a 10-item test anxiety questionnaire. Formal class or self-study preference was obtained from each students' matriculation form. Examination data for the CLU examinations (over a period of four years) were also obtained for each student.

Results indicated that many students reported that high levels of test-related anxiety debilitated their examination performance. Both formal class and

BEST COPY AVAILABLE

self-study students had similar average anxiety levels. Again, overall exam performance for the formal class and self-study students did not differ. Complex statistical analyses yielded the most interesting findings. Tests of parallelism of slope for the formal class and self-study groups were performed by regressing each of the CLU examination measures (essay part score, objective part score, final overall score) on test anxiety. The Johnson-Neyman technique was used to define a region of test anxiety scores over which the exam differences between the study methods were statistically significant. As illustrated in Figure 2 high anxiety students achieved higher final examination scores under the formal class methods as compared with the self-study mode. Conversely, low anxiety students performed better under the self-study condition, especially on the essay sections of the examinations (a statistically significant effect). This study supports previous research--anxious students perform best in situations that provide more external structure and that demand less independent action.

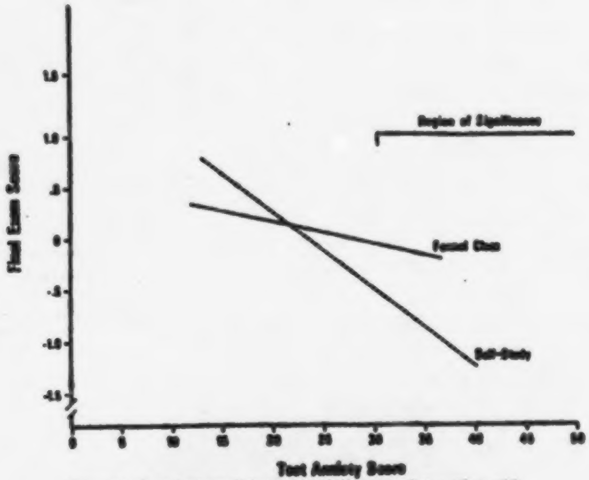


Figure 2. Test Anxiety X Instructional Structure Interaction with Final Exam Score as outcome

Although the results should be considered preliminary, they suggest that students may profit from counseling on study methods. Matching learning styles with learning methods may increase student achievement and retention. This would appear to be an area where the application of ATI research results could make a practical difference.

Study 5

This investigation was also an attempt to examine the differential effects of formal class and self-study as methods of preparing for the CLU examinations. The present research, however, analyzed the effects of study method on essay as well as objective examinations. Subjects included all (N = 191) CLU students who had completed the recommended sequence of the four combined objective/multiple-choice, and essay examinations over four consecutive years, and for whom study method information was available.

A comparison of formal class and self-study examination performance on objective and essay sections (averaged over the four relevant CLU examinations) is illustrated in Figure 3. On the total examination scores (i.e., objective plus essay) for all four examinations, formal class students did slightly better than self-studiers but the difference was not statistically significant ($p > .05$). When essay and objective scores were analyzed separately, formal class students were found to out-perform self-studiers on the essay portions of all four exams. The two different exam formats resulted in differences in student performance. Some students did much better on essay portions than on objective multiple-choice portions and some did worse. A measure was computed to reflect the ability of students to perform better on essay over objective (or objective over essay exams.) Analyses indicated that formal class and self-studiers differed to a statistically significant degree ($p < .05$) on this measure. Results showed that formal class students, when compared with self-studiers, had a higher level of performance on their essay exam portions in relation to their objective test performance.

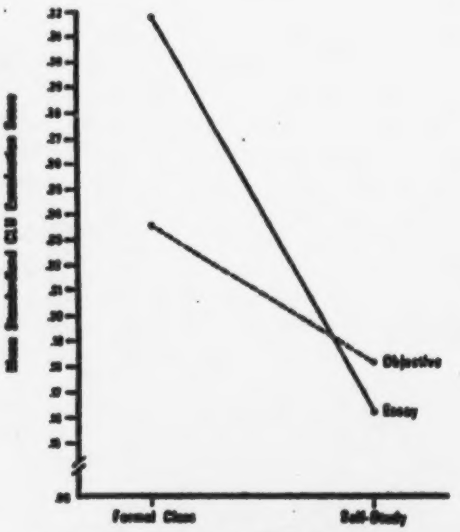


Figure 3. Comparison of formal class and self-study examination performance on objective and essay sections averaged over the four relevant CLU examinations

Because this was a correlational study and not a true experiment, the causal inferences regarding the effects of study methods cannot be made with absolute certainty. It may be that formal class causes higher performance on essay exams, but it is also conceivable that persons who are more likely to do better on essay exams are attracted more to the formal class method of instruction. That is, a self-selection bias and not study method may then be responsible for the observed differences. Such limitations should be recognized in all correlational studies. It appears that study methods probably do differ in their effects, but a sufficient range of outcome variables must be studied to detect such effects.

In summary, it seems that study methods can make a difference. Formal class seems especially effective for students with lower educational backgrounds, with high levels of test anxiety, and for those taking essay-type examinations. Further research is indicated to assess study method effects on student attrition.

REFERENCES

Cronbach, L. J. and Snow, R. E. Aptitudes and instructional methods. New York: Irvington Press, 1977.

Dunkin, M. S. and Biddle, B. J. The study of teaching. New York: Holt, Rinehart, and Winston, 1974.

Self Planned Professional Learning Among Public School Adult Education Directors: A Social Network Analysis

by

Harold Beder* Gordon Darkenwald & Thomas Valentine

Ruthers University

Introduction

It is axiomatic to state that if professionals are to perform adequately they must learn the skills and knowledge associated with effective role behavior. Not only may such skills and knowledge be learned through formal preparatory education and continuing professional education planned and conducted by educators, but they may also be learned informally through deliberate and systematic person-to-person interaction planned by the learner. In fact, Tough (1978) suggests that about 73 percent of learning project activity is self planned.

In person-to-person learning activity, the resource for learning is another "knowing" individual and the method of communication is interpersonal discourse. Theorists in organizational analysis, socialization, and communication alike suggest that person-to-person learning is a major vehicle through which individuals learn appropriate role behavior. To the extent that this is true, it becomes important to understand interpersonal learning, for if understanding leads to an ability for harnassing it, we shall have gained vital new tools in our pursuit of continuing professional education.

The present study investigated how public school adult educators learned important professional information through interaction with other professionals. To achieve this purpose the methods and perspective of social network analysis were applied.

Social Networks and Learning

As defined by Mitchell (1969), a social network is

> "...a specific set of linkages among a defined set of persons, with the additional property that the characteristics of these linkages as a whole may be used to interpret social behavior of the persons involved." (p. 2)

The structure of social networks and the nature of the transactions that take place through them affects the behavior of individual network members as well as the behavior of the network as a group. For example, Bott (1955) in an early study showed that conjugal behavior was affected by network factors, and Granovetter (1974) demonstrated that success at job acquisition was network related.

---

* Graduate School of Education, Rutgers U., New Brunswick, NJ 08903

Applied to a learning context, the individuals within a social network constitute potential learning resources--sources of needed skills and knowledge, and the nature and flow of learning transactions among the network members (who learns what from whom for what reason) describes the learning process.

Structural properties of networks are one set of factors which help us to understand network learning behavior. Composition, for example, is a structural characteristic pertaining to the attributes of network members. If, for example, an individual's professional learning network were comprised of up-to-date experts in the field, he or she might well have a learning advantage over an individual whose network was comprised of the poorly trained or ignorant.

The process of network transactions is equally important, for not only must a network structure exist, but there must be a mechanism for "driving" knowledge through it. Role theory and exchange theory are relevant here. In respect to role theory, a professional might give information to a friend, because "helping" is an expectation of the friend-to-friend role relationship. From an exchange perspective, a professional might give important information to another in expectation of a return of the favor at a later time.

Methods and Procedures

The population for the study consisted of all the publically funded public school adult education directors in New Jersey (N = 129). The population comprises a professional system circumscribed by a common institutional affiliation (public schools), a common locus of authority (the Bureau of Adult, Continuing and Community Education of the State Education Department), and a common function (providing comprehensive adult education programs to volunteer learners). Three research questions were posed:

1. What was the structure of the professional learning network, i.e., to what extent were there identifiable groupings or cliques of directors who tended to enter into professional learning transactions with each other.

2. What were the salient attributes of professional learning cliques, i.e., their defining characteristics?

3. What factors differentiated directors who were members of professional learning cliques from those who were isolated from the interpersonal learning network?

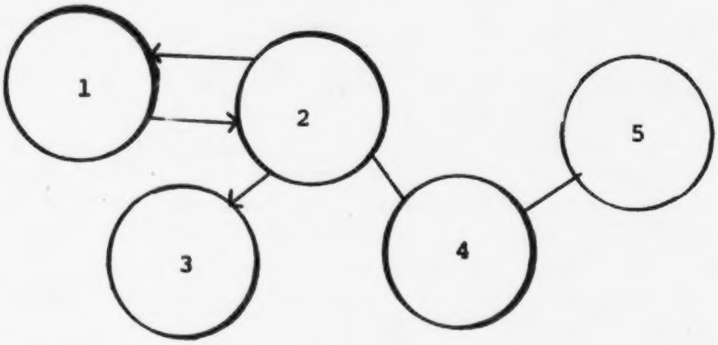
Data were collected through a brief mailed survey which asked every director to list the names of those: (a) from whom he "was most likely to receive important professional knowledge" and (b) to whom he "would most likely transmit this knowledge." The respondent could nominate as many persons as he or she chose to. Additionally, information was sought regarding the number of years the respondent had been a director of adult education, his other professional association memberships, the director's program size and budget, and the geographical location of the program. Seventy usable surveys were returned for a response rate of 54 percent.

Each respondent and each person nominated as a source or recipient of professional knowledge was then assigned a code number. All nominees who were not also respondents (i.e., directors) were then dropped from the sample, a necessity for data analysis. The effective size of the sample was thus reduced to 70.

Data Analysis

The first step in analysis was the preparation of a network "map" which charted the professional learning relationships derived from the survey data. Each individual was identified by a circle containing his code number. Lines were then drawn between circles indicating professional learning transactions between individuals.

Figure I
Network Mapping



A professional learning network was defined as a set of persons linked by common professional affiliation and involved in interpersonal learning transactions. A professional learning transaction was defined as the act of sending and/or receiving important professional information, and a professional learning clique as a highly connected set of professionals involved in professional learning transactions. As can be seen from the example in Figure 1, respondent 1 has a learning transaction with 2; 2 with 1, 3 and 4; 4 with 2 and 5; and 5 with 4. The network map permitted graphic identification of professional learning cliques.

In the second step of data analysis, the data were subjected to cluster analysis. Cluster analysis identifies "clusters of observations which have similar attributes... The distance between two clusters is defined as the maximum distance between an observation in one cluster and an observation in the other cluster" (SAS Institute, 1979, p. 157). In essence, cluster analysis produced a quantitative expression of the graphic network map and thus constituted a validity check for the two data analysis procedures. The results of the two procedures were congruent.

After professional learning cliques had been identified, each was assigned a color code. Each director's program was then located on a map of New Jersey and an indicator placed on the program's municipality indicating the clique color code. Thus the relationships of cliquings to sociodemographic "environmental" factors could be ascertained through simple observation by anyone with knowledge of the state.

In the final step of data analysis the attributes of directors who were members of professional learning cliques (N = 60) were compared to isolates in the system, an isolate being defined as a director who nominated no other director as a source of professional learning transactions. There were only 10 isolates in the entire sample of 70 directors. Variables for comparison included the number of years the director had been a director, professional association affiliation, director's program size and budget, and full time/part time work status. Appropriate tests of statistical significance were applied to the comparisons.

Findings

Professional Learning Network Structure

Cluster analysis identified two attributes of the New Jersey public school adult education system of particular importance. First, except for the directors who were isolates, the entire system was interconnected to the extent that information reaching any one director could hypothetically reach every other director. This means that, at least indirectly, the professional knowledge possessed by any one director was potentially available to all directors (except the isolates previously noted) through social network interaction.

Second, it was found that there were five professional learning cliques, a clique being defined as a group of directors who were highly interconnected in their professional learning transactions. In highly connected cliques, there are more linkages or "channels" through which knowledge can flow among members than in loosely connected groupings. Thus there is a greater potential for one clique member learning from any other. Professional learning cliques, then, are particularly potent interpersonal sources of professional knowledge. The question arises, then, of what factors are important in their formation.

When program locations of learning clique members were charted on a map of New Jersey, several attributes became immediately evident. First was the attribute of geographical proximity. For three of the five cliques, all members directed programs in contiguous or nearly contiguous municipalities. In no case did a professional learning clique span the state or even half of it. Second, it was evident that professional learning clique members tended to direct programs that shared very similar sociocultural environments. Clique 1 included six members, all of whom directed moderately sized programs in the heart of New Jersey's metropolitan New York urban concentration. Clique II (N = 4) was comprised of directors whose programs were located in small, affluent communities that almost perfectly ringed the urban concentration. Clique III was comprised of five directors who administered large, comprehensive programs in middle class, central New Jersey communities. All but one member of Clique III had been a president of one of New Jersey's two adult-community education professional associations. Clique IV (N = 4) included directors whose programs were in neighboring towns at the periphery of a southern New Jersey center of population and Clique V (N = 5) directors were located in nearby towns which had traditionally been former farming centers.

Professional learning cliques demonstrate Rogers' (1971) principle of homophily -- likes tend to interact with likes. It may well be that similar program environments produce similar problems, the common resolution of which becomes the basis for learning clique formation. Proximity of programs appears to be a significant asset in interaction.

Cliqued versus Isolates

To ascertain whether there were basic differences between isolates (N = 10) and directors who were members of professional learning cliques (N = 60), the two groups were compared according to several program and director variables. The *t*-test was used for continuous variables; chi square for discrete variables. Given the small sample size, the significance level was set at .10 to reduce the possibility of a Type II error.

It was found that there was no significant difference between isolates and cliqued directors in respect to the size of their program enrollment (*t* (30.7) = 1.48, *p* = .15). There was, however, a statistically significant difference in regard to the number of years the director had been a director (*t* (30.8) = 3.2, p = .09). On the average, cliqued directors had served 9 years in the role, while isolate directors had served 5.4 years.

There were no significant differences between the groups in respect to full time/part time work status (X^2 (1) = .013, *p* = .91) or director's sex (X^2 (1) - .024, *p* = .88). Yet there were significant differences in regard to professional association affiliation. While 87.5 percent of the cliqued directors were members of the Association for Adult Education of New Jersey, one of the state's two relevant professional organizations, only 60 percent of the isolates were members (X^2 (1) = 3.3, *p* = .07). Although 78.3 percent of the cliqued directors were members of the Association for Community Education of New Jersey, the other professional association, 55.6 percent of the isolates were members. The difference was not, however, statistically significant (X^2 (1) = 1.7, *p* = .19). While 50 percent of the cliqued directors had held office in one or both associations, only 20 percent of the isolate directors had held office (X^2 (1) = 2.6, *p* = .10).

It seems likely that one's longevity in the role of director enhances professional learning clique membership. Since network relationships form over time, the more time elapsed, the greater the number and connectedness of the relationships. The relationship between professional association affiliation and professional learning clique formation may be interactive. While, on one hand, membership in professional associations provides a forum for meeting other directors and forming clique relationships, on the other, clique members who are active in professional associations may be "recruiting" other clique members.

Conclusion

It is clear that public school adult education directors in New Jersey do indeed utilize social networks for professional learning transactions which they perceive to be important. Every respondent indicated at least one professional learning relationship; one listed fourteen. This was true even for isolates, for although they did not indicate professional learning transactions with other directors, they did report learning transactions with persons internal to their school districts. When isolates are excluded from the sample (N = 10), the professional learning network of those who remain (N = 60) is completely interconnected to the extent that information from one director can hypothetically reach all directors. Hence the potential for informal professional learning is high. The finding that professional learning clique formation is related to geographical proximity and socio-cultural commonality in program environment may give guidance to continuing professional educators desiring to facilitate the formation of professional learning cliques. It may be more advantageous to group professionals with similar programs than to group those with dissimilar programs. Similarly, it should be noted that professionals who are new to a field and those without professional association affiliation are more likely to be isolates and hence may be more in need of network membership facilitation performed by continuing professional educators.

References

Bott, E. Urban families: conjugal roles and social networks. Human Relations, 1955, 8, 345-384.

Granovetter, M.S. The strength of weak ties. American Journal of Sociology, 1973, 78, 13-60.

Mitchell, J.C., (Ed.). Social networks in urban situations. Manchester, England: University of Manchester Press, 1969.

Rogers, E.M. & Shoemaker, F.F. Communication of innovations: a closs cultural approach. New York: The Free Press, 1971.

SAS Institute, SAS user's guide. Cary, N.C.: The Institute, 1979.

Tough, A. Mahor learning efforts: recent research and future directions. Adult Education, 1978, 28, 250-264.

The authors wish to express their gratitude to the following Rutgers University doctoral students who assisted in the research: Natalino Carrea, Diane Gruenberg, Carole Miller, Doreen Wichowski, and Peter Wiesner.

Participation in Study Circles and the Creation of Individual Resources

Lena Borgström Lars-Erik Olofsson
Stockholm Institute of Education*

INTRODUCTION

At the beginning of the 1970s, adult education in Sweden acquired an overriding objective and became a major topic of public policy. The foremost task of all types of adult education now became that of bridging educational gaps in the community. Whereas previously it had been more service- or demand-oriented, adult education now became an instrument of distributive policy, together with such others as the tax system, i.e. a means of distributing society's resources more equitably.

In this context the term "resources" is to be taken in the broad sense, as including not only economic wellbeing but also access to resources of other kinds, such as health, education, employment, family life, and social and civic rights. The term "wellbeing" was used in this sense by the Swedish Low Incomes Commission in its survey of the living conditions of the Swedish people at the end of the 1960s. The report of this Commission provided arguments in favour of increased expenditure on adult education by pointing to the close connection between formal education and other components of wellbeing. It is interesting to compare this with the research which has shown education to be of marginal importent particularly where economic equality is concerned (e.g. Jencks et al, 1972). In Sweden, education during adulthood came to be viewed as a means of correcting and offsetting deficiencies of the regular school system. One underlying assumption was that education during adult years would be connected with other components of wellbeing in the same way as youth education had proved to be. Whether or not this assumption agrees with actual developments is today an important problem for researchers. Attitudes to education, its societal role and the resources which it is presumed to create naturally have a crucial bearing on educational planning and the selection of reform strategies. Clearly, a study of the effects of education can be based on a variety of premises and the results interpreted accordingly.

We propose to study the effects of participation in adult education in terms of changing social, cultural and political resources of the individual. In doing so we have elected to elucidate the possible effects of participation in study circles at individual level by means of empirical material.

Study circles are by far the commonest form of adult education in Sweden, roughly three million participants annually being reported at the beginning of the 1980s. Since, however, the same person can take part in several circles every year, the number of individuals taking part falls short of the registered number of participants. About one million persons out of an adult population of barely six million take part in study circles every year. Rather less than two-thirds of these participants are women. We may add that during the 1980/81 fiscal year, a total of some 310 000 study circles were arranged, which was twice the figure for the end of the 1960s.

The evolution of the Swedish study circle can be traced back to the beginning of this century. It emerged from the educational activities which were conducted by the popular movements and which for a long time constituted a parallel arrangement to the formal school system. Education within their own ranks became an integral part of the struggle waged by the popular movements to bring about social change. In addition to transmitting alternative ideologies, these educational activities also provided alternative means of social mobility. The present century has witnessed a transformation of the relationship between the popular movements and the dominant culture. The movements have become more and more part of the establishment and their educational system has come to be used less as an alternative and more as a complement to the official system. State grants for study circles were introduced in 1947. To qualify for these grants, circles have to have an approved scheme of studies, their leaders have to have certain minimum qualifications, and basic stipulations have to be met concerning the duration of studies, the number of participants and the subject studied. The overall goals of adult education also apply to study circle activities.

---

*Stockholm Institute of Education, Department of Educational Research, Box 34103, S-100 26 STOCKHOLM, Sweden

Today study circles in Sweden are run by ten adult education associations affiliated to a number of organizations such as political parties, trade unions, free churches or the temperance movement. Arts subjects predominate, but languages and social sciences also bulk large.

In our study of distributive effects, we have chosen to consider individual variations with regard to certain resources. We have taken as our starting point the concept of wellbeing in the broader, more-than-economic sense referred to by way of introduction - an approach which would seem to have gained currency in many countries and which is reflected, for example, by the social indicator movement. In expanding the concept of wellbeing beyond the boundaries of economics, one is faced with at least one important theoretical consideration concerning the definition of the concept. One definition is in terms of the satisfaction of needs, and another in terms of access to resources (Johansson, 1979). In view of the difficulties encountered when attempting to define wellbeing as the satisfaction of needs, we have chosen to adopt the definition applied by the Low Incomes Commission, which regarded wellbeing as access to resources, i.e.

> "the individual's disposition of resources in money, possessions, knowledge, skills, physical and psychological energy, social relations, confidence etc, with the help of which the individual can control and consciously command his life situation." (Johansson, 1970)

This definition is based on the view of the welfare concept expressed by the British socio-political theorist Richard Titmuss (1963). While retaining a consumption or need perspective, it assumes an active individual, capable of influencing and commanding his life situation (Rubenson, 1980).

This approach is also reflected by the goals of adult education policy during the 1970s, particularly as regards its role in furthering the development of democracy by enhancing the social, political and cultural awareness of citizens and augmenting their active contribution to social change. This is in keeping with the shift of emphasis which has occurred in the debate on equality in recent decades concerning the role of education. During the 60s, greater equality was usually identified with economic equality and increased social mobility, whereas during the 70s the main emphasis was transferred to the importance of education as a means of attaining equality of participation in democratic processes (Murray, 1980).

METHODOLOGY

The empirical material on which this paper is based is "ex post facto" in character, which of course is typical of a great deal of research in the behavioural sciences. Consequently this study is afflicted with problems of interpretation which can be expressed as follows: Can we be sure that it is participation in study circle activities that leads to a change in the resources of the individual, or is there some underlying variable which may perhaps account for both participation and the change in resources? We can only accept this problem and do our best to eliminate the disadvantages of the "ex post facto" approach.

The empirical foundation of this paper comprises a longitudinal study of a representative sample of adults. Compared with cross-sectional studies, the longitudinal approach offers the following advantages, among others:

- Changes can be studied in chronological order, which has a crucial bearing on causal relationships.
- With a longitudinal approach, one has more opportunity of finding natural control and reference groups.
- There are certain opportunities of studying long-term effects, since the subjects are followed up for a longer period of time.

The longitudinal data base utilized for the present study has been built up by the Swedish Institute for Social Research at the University of Stockholm in collaboration with the Central Bureau of Statistics (SCB)(1). The purpose of this data base is to study the distribution of wellbeing in Sweden and the changes occurring over time. Wellbeing here is interpreted in the sense we have already discussed and, in addition to incomes and other economic circumstances, also includes such things as employment, diet, health, education, political resources, leisure and recreation.

Roughly one adult Swede per thousand has been interviewed on three separate occasions (1968, 1974 and 1981) concerning the various components of wellbeing. The survey as a whole includes roughly 6 000 persons at a time. Unbroken longitudinal data are available for some 3 300 individuals who were between 18 and 62 in 1968 (i.e. between 31 and 75 in 1981). Our study is confined to a few of the questions asked during interviews, viz certain background variables such as education, sex and social status, and the questions referring to political, cultural and - to some extent - social resources.

By far the greatest number of courses in leisure hours take the form of study circles. As a criterion of participation in study circle activities, we have taken a question concerning the extent to which people usually attend study circles or courses during their leisure hours. Participation in study circles can of course vary from year to year, and in order to check the scope and chronological sequence of activities, we have divided the survey population into the following eight groups:

Table 1 Study circle participation (Yes/No) (Total N = 3 281)

Group	1968	1974	1981	N	Group	1968	1974	1981	N
I	No	No	No	1 529	V	Yes	No	No	196
II	No	No	Yes	360	VI	Yes	No	Yes	132
III	No	Yes	No	305	VII	Yes	Yes	No	155
IV	No	Yes	Yes	288	VIII	Yes	Yes	Yes	316

(1) The SCB has also been engaged since 1974 in an independent study of the development of wellbeing in Sweden. About 12 000 persons aged 16-74 have been interviewed annually. These data, however, are cross-sectional and therefore unsuitable for effect studies at individual level.

As can be seen from this table, the participation pattern varies from group I, which has never taken part, to group VIII, which has taken part throughout the period studied.

As an indicator of political resources we employ an index of political participation. A person is considered "politically disadvantaged" if he or she meets all of the following requirements:

- . Not a member of a political party or trade union organization
- . has never taken part in a public demonstration
- . has never contacted a person in a position of responsibility so as to influence a decision in public affairs
- . has never addressed a meeting of an association or organization
- . has never written a letter or article to a newspaper or periodical.

About 30% of the survey population in 1974 were classified as "politically disadvantaged".

As an indicator of cultural resources we employ an index aggregating the scope of visits to the theatre, reading books and music-making as leisure activities. A person is defined as "culturally disadvantaged" if he or she never normally takes part in any of these three activities or sometimes takes part in not more than one of them. About 40% of the survey population in 1974 were classed as "culturally disadvantaged".

As an indicator of social resources, we have selected intensity of association with friends and acquaintances during leisure hours. We regard a person as "socially disadvantaged" if he or she never or very seldom visits or is visited by friends. According to this definition, about 7% of the survey population in 1974 were "socially disadvantaged".

FINDINGS

As can be seen from Table 1, the survey group presents a varied pattern of participation. The background data also point to certain variations between the groups. For example, group I, which usually never participates, includes a larger proportion of men, working class people and under-educated persons than the other groups, especially group VIII. We will now concentrate our attention on those groups (I-IV) stating in 1968 that they did not usually take part in study circles. This will give us a uniform starting point. We have excluded group III, however, because of its irregular participation pattern.

We begin by presenting the proportions of "disadvantaged" persons in groups I, II and IV with reference to the three surveys and various resource components. For purposes of comparison, we have also given the figures for group VIII, which is an "exclusive" group because it always seems to be taking part in some form of study circle.

Table 2 Percentage "disadvantaged" with regard to political, cultural and social resources

Group	I (No, No, No)			II (No, No, Yes)			IV (No, Yes, Yes)			VIII (Yes,Yes,Yes)		
	Pol	Cult	Soc	Pol	Cult	Soc	Pol	Cult	Soc	Pol	Cult	Soc
1968	70	59	10	66	43	5	66	35	4	42	23	4
1974	32	55	8	22	38	3	20	25	2	8	17	1
1981	30	53	11	12	30	4	12	18	2	6	19	1
N	1529	1529	1529	360	360	360	288	288	288	316	316	316

This table shows that all groups in 1968 included a relatively large proportion of politically "disadvantaged" members. These group figures declined sharply in 1974, regardless of whether or not people participated in circles. Possibly this may be connected with political developments in Sweden during these years. After 1974, the proportions of "disadvantaged" persons in groups I and VIII, where participation/non-participation remained unchanged over the years, decline insignificantly. In groups II and IV, on the other hand, there is a sharp decline during the same period.

Where cultural resources are concerned, we cannot observe the same sharp decline in the proportion of "disadvantaged" persons between 1968 and 1974 as we could regarding the proportion of politically "disadvantaged". Groups II and IV, however, present a relatively steep decline between 1974 and 1981. Studying the period between 1968 and 1981, we find that groups I and VIII decline insignificantly compared particularly with group IV, where the proportion of "disadvantaged" members is halved. Since the proportion of socially "disadvantaged" persons is consistently low, there is no scope for any heavy reductions, and we shall therefore refrain in the present connection from presenting any further data concerning this variable. We may note, however, that those who never take part in study circles include a larger proportion of socially "disadvantaged" persons (10% approx.) than other groups.

Table 2 shows net changes between the years, i.e. the sum of all changes, both positive and negative. In an attempt to isolate positive changes between 1968 and 1974, Table 3 shows changes solely for those individuals who were "disadvantaged" in 1968. The most interesting results here concern groups I and IV, which differ as regards participation in 1974 but not in 1968.

Table 3 Percentage of all persons "disadvantaged" (100%) in 1968 also "disadvantaged" in 1974

Group	I (No, No, No)		IV (No, Yes, Yes)	
	Pol	Cult	Pol	Cult
1968	100	100	100	100
1974	41	77	27	50
N	1071	901	190	101

We may note here that half of the persons in group IV who were culturally "disadvantaged" in 1968 had strengthened their cultural resources by 1974, whereas the corresponding figure for group I is only about 1/4. A heavier reinforcement can also be observed in group IV regarding political resources.

In order to refine positive changes still further, Table 4 has been made to show the percentage of those disadvantaged in both 1968 and 1974 who were still "disadvantaged" in 1981. Groups I and II are most interesting here, because they differ as regards participation in 1981 but are equal in 1968 and 1974.

Table 4 Percentage of all persons "disadvantaged" (100%) in 1968 and 1974 also "disadvantaged" in 1981

Group	I (No, No, No)		II (No, No, Yes)	
	Pol	Cult	Pol	Cult
1968	100	100	100	100
1974	100	100	100	100
1981	64	83	35	64
N	436	693	75	96

The tendency here is the same as in the earlier tables, with the group (II) taking part in study circles in 1981 displaying a more distinct reduction in the proportion "disadvantaged" compared with the group not taking part in 1981 (I). This tendency is somewhat more pronounced where political resources are concerned.

The above figures show that the groups beginning to take part in study circle activities consistently strengthen their resources more than those who do not take part. One question now arising is whether the resource changes observed are attributable to study circle participation in itself or whether there are other explanations. Studying the background variables available for the material, one finds that these groups differ, for example, as regards their level of formal schooling and as regards socio-economic background. Since these variables are closely interconnected, we will confine ourselves here to briefly elucidating the importance of formal education. As stated earlier, average schooling is least in group I (no, no, no) and greatest in group VIII (yes, yes, yes). Studying the resource variables for persons who in 1968 had only attended compulsory elementary school (57% of the survey population), we find that the proportion of "disadvantaged" is consistently higher as regards political and cultural resources, while social resources remain practically unchanged. In relative figures, the changes occurring over time in the proportion of "disadvantaged" persons described the same pattern as for the survey population as a whole. One plausible conclusion here is that the formal schooling received in the youth education system cannot account for the differences of resource development between the various groups.

During the period ending in 1981, however, some of the subjects who in 1968 had attended compulsory elementary school only improved their formal educational qualifications. This is truer of those taking part in study circles during the period than of those not doing so. This reinforcement of formal education, however, is less pronounced than the reinforcement of political and cultural resources. Thus the augmentation of resources can only in part be attributed to the rising educational level. We should remember, however, that the latter has in all cases been accomplished by means of adult education, above all municipal adult education.

FINAL COMMENTS

In this study we have established a connection between participation in study circles and the level of resources. In addition, we have found a connection between commencement of circle studies and the reinforcement of political and cultural resources. One crucial question now, of course, is whether our findings can support an interpretation to the effect that participation in study circles leads to the augmentation of resources. Our longitudinal approach has made it possible for us to observe that the rise in the level of resources has occurred simultaneously with changes in the pattern of participation. We find that this corroborates our assumption that participation in study circles accounts, at least partly, for the growth of resources.

Our continuing work will be devoted to a study of other conceivable explanations for changes in individual resources. In this connection we will also be studying resource changes in relation to participation in other forms of adult education.

In order for distributive effects to be achieved, it is of course necessary to recruit the most disadvantaged members of the community. This, however, is not sufficient. It is also crucially important for adult education to result in a reinforcement of the participants' resources.

REFERENCES

Jencks, C. et al (1972). Inequality: A Reassessment of the Effect of Family and Schooling in America. Basic Books, New York.

Johansson, L. (1970). Education: Discursive section. Draft version of chap. 7 in the report on the living conditions of the Swedish people. Allmänna förlaget. Stockholm. (In Swedish)

Johansson, S. (1979). Towards a theory of social reporting. Report No. 2 from the Level of Living Project. The Swedish Institute for Social Research. Stockholm. (In Swedish).

Murray, M. (1980). Education and equality. An interim report from the project "Forecasts and Political Planning for the Future." Secretariat for Futures Studies. Stockholm. (In Swedish).

Rubenson, K. (1980). Background and theoretical context. In: Höghielm, R. & Rubenson, K. Adult Education for social change. Research on the Swedish Allocation Policy. Liber. Lund.

Titmuss, R. (1963). Essays on the Welfare State. Allen & Unwin. London.

AN A.B.E. ORIENTED FORM OF THE EDUCATION PARTICIPATION SCALE

Roger Boshier*
University of British Columbia, Vancouver
Canada

INTRODUCTION

Adult education program planning places a high priority on the importance of diagnosing learner needs. This stems from the fact adults are reputed to have a broad experiential base (Knowles, 1980) and a diminished margin for systematic learning. Central to the program planning process is the notion of matching program content and processes to the needs, orientations and expectations of learners. It was this kind of ethos that led to the creation of the 48 item Education Participation Scale (Boshier, 1971; 1982). The E.P.S. has now been in use for over a decade and administered to thousands of adult education participants in different parts of the world (see Boshier & Collins, 1982; 1983). It is reliable and has a factor structure which remains stable across and within cultures.

Some items for the E.P.S. were secured during interviews with participants in adult education programs sponsored by three Wellington (New Zealand) adult education organisations. Others were meant to represent one or more of Houle's (1961) "learning" orientations and developed after close scrutiny of The Inquiring Mind.

The E.P.S. was primarily developed for use with middle-class New Zealand adult education participants. New Zealand is a small nation of three million people of largely British stock. It has a well-developed system of public education, high schools that offer courses and set exams more rigourous than those in comparable North American schools and a British university system. It also has an adult education system that closely approximated that in Britain (Williams, 1978) and, until 1974 was well on the way toward creating a learning society (see Boshier, 1980). Since 1974, hostile government policies have stunted the development of adult education. Nevertheless, when the E.P.S. was developed adult basic education was not a priority. Most of the population had received a good education in the state school system. It was widely assumed that there were no illiterates in New Zealand; there was little need for adult basic education.

New Zealanders now realise these assumptions were in error. Moreover, since the Third World Conference (UNESCO, 1972) on the theme of "Adult Education and the Disadvantaged" there has been a renewed preoccupation with adult basic education. Of course, Americans have long considered adult basic education to be central to their enterprise so, for them, developments after 1972 largely represented a continuation of previous policies.

Despite the fact the general form of the E.P.S. was primarily developed for use with middle-class New Zealanders it has been successfully administered in many A.B.E. settings (see Listing of articles, 1982). But because A.B.E. clients have motivational orientations not encompassed by the general form of the E.P.S. and because some of the language is more sophisticated than that used by A.B.E. participants, there has been a long-standing need to produce a reliable, valid, and easy to score, A.B.E.-oriented form. Despite all this, the existence of an A.B.E. form could have negative outcomes. Meta-research is needed to examine the extent to which durable laws, facts and theory will straddle cultural and socioeconomic boundaries. New versions of the E.P.S., bootleg copies that have aberrant scaling and "new" items create problems for meta-researchers. Thus, although there are good arguments for creating an A.B.E. oriented form it is realized that this could add to, rather than diminish, the problems of those trying to integrate data gathered with related but different instruments. But, on balance, there appears to be a need for an A.B.E. form. The need stems from the unique characteristics of A.B.E. participants and the fact basic education is central to North American adult education.

---

*Department of Adult Education, University of B.C., 5760 Toronto Rd., Vancouver, B.C. V6T 1L2, CANADA. Thanks are due to Tom Petersen, staff at the King Edward campus of the Vancouver Community College, and Don Radstak of the Lakeside womens correctional centre. The BEPS is copyrighted but available from Learning Press Ltd., Box 46403, Station G, 3760 West 10th Avenue, Vancouver, B.C. V6R 2G0, CANADA.

The general form of the E.P.S. has been used for both teaching and research in both A.B.E. and middle-class environments. Those using it for teaching purposes often employ it for climate setting at the beginning of a course. Teachers administer the instrument to participants who then score their own scale. Scores are often displayed on an overhead projector and used to stimulate discussion concerning learner needs, orientations and expectations. But the most important application is in research. More than fifty authors have used the E.P.S. in dissertation research where E.P.S. scores are typically treated as dependent variables. Researchers appear to be more concerned with the antecedents of motivational orientations than with consequents that flow from them.

Goals of this Project

Having regard to the fact an A.B.E. oriented form will probably be used for both teaching and research this study was designed to:

1. Create an A.B.E. oriented form of the E.P.S. that is reliable, valid and has a psychometrically and theoretically defensible factor structure.
2. Compile norms for typical A.B.E. populations.

METHOD

Item Selection and Scaling

The King Edward campus of the Vancouver Community College is one of the largest adult basic education-oriented institutions in Western Canada. In 1979, 120 participants enrolled in King Edward classes were asked to think and talk abbut why they had enrolled in their course. Following a brief discussion, participants were asked to write five "reasons" on a piece of paper. During this step the instructor "floated" from person to person to help them get their reasons on paper. This process produced a list of approximately 400 reasons. These were then transferred to index cards - one reason per card. Next the cards were sorted into a-priori factors (e.g. "Cultural adjustment" reasons; "job-related" reasons and suchlike). Because many participants were enrolled for the same reasons there was considerable redundancy within the item pool at this stage. Thus, while taking care not to eliminate any "types" of orientations, redundant items were discarded. The remaining items were then edited and reworded so as to be grammatical and capable of comprehension by typical A.B.E. participants. Next, items from the general form of the E.P.S. were added. Items such as "to get relief from boredom", "to satisfy an enquiring mind", "to share a common interest with my spouse or friend", were deemed to be as applicable to A.B.E. as to middle-class populations. When these processes were completed 120 items were left; these were then cast on a four-point scale (No Influence; Little Influence; Moderate Influence; Much influence) identical to the general form of the E.P.S.

Refining the Instrument

As noted, 120 items were cast on a four-point scale. Instructions asked the participant to "think back to when you enrolled for your course this year". The remaining instructions were worded as simply as possible and asked respondents to circle the category (i.e. No influence; Little influence; etc.) which influenced them to participate. They were told that no reason for enrolling is any more or less desirable than any other reason; nor were there right or wrong answers.

They were asked to "be frank". Attached to the questionnaire was a cover sheet eliciting information concerning the respondent's age, country of birth, language spoken "best", sex and type of class (e.g. A.B.E., E.S.L., work skills).

The instrument was administered to 280 participants at King Edward campus. Instructions were read to respondents; those having difficulties were told to request help from the researchers. Even when no help was requested the researchers "floated" among respondents. This process secured 257 completed questionnaires. E.P.S. data were factor analysed in the manner described below and, as a result, a 42-item form of the instrument was produced. In January, 1983 the "final" form of the Basic Education Participation Scale (Boshier, 1982a) was administered to participants in classes at King Edward campus and inmate-students in a Canadian jail for women. During this phase of the project, the procedures were the same as those used earlier; instructions were read, a researcher "floated" through the class.

RESULTS

Initial Factoring

Responses secured from 257 participants involved in the first phase of this study were intercorrelated, factor analysed and, in a desire to produce uncorrelated factors, subject to orthogonal (varimax) rotation. Ten, nine, eight, seven, six and five factor solutions were examined. Impure items loading on more than one factor were dropped as were most of those with loadings lower than .50. Finally, the solution shown in Table 1 was adopted. This contains seven factors composed of "pure" items that account for 58.19 percent of the variance. The sum of the squared factor loadings divided by the sum of the communalities for each factor shows that, of the total variance explained after rotation, Factor I accounted for 17.64 percent; Factor II for 16.53 percent; Factor III for 14.15 percent; Factor IV for 13.72 percent; Factor V for 12.98 percent; Factor VI for 12.95 percent and Factor VII for 12.00 percent. Note that each factor is composed of six items, all variables have high loadings on only one factor (and are thus "pure"). Table 1 shows each item mean for the 1979 development group, S.D.'s and loadings on each of the seven factors.

Space constraints inhibit the extent to which each factor can be discussed in detail. In short Factor I "Communication Improvement" is concerned with enrolling to improve communication (largely verbal and written) skills; Factor II "Social Contact" identifies respondents enrolled to make friends and meet new people, Factor III "Educational Preparation" measures the extent to which a participant is enrolled in an A.B.E. program as part of a larger plan for continuing education; Factor IV "Professional Advancement" measures the extent to which participants are enrolled to prepare for or advance in an existing job; Factor V "Family Togetherness" measures the extent to which the participant is motivated by a desire to obtain skills that will facilitate interaction and "togetherness" in their families; Factor VI "Social Stimulation" resembles the old Escape/Stimulation" factor in the general form of the E.P.S. It measures the extent to which participation is motivated by neurotic needs stemming from loneliness, isolation and boredom. Factor VII "Cognitive Interest" is the same as the same-named factor in the general form; it identifies participants for whom participation has intrinsic rewards - who learn for the sake of it.

The final form of the Basic Education Participation Scale (BEPS) thus consists of seven factors containing six items each, for a total of 42 items. In the final form, item 1 is "To improve language skills", the first item in Factor I; item two is "To become acquainted with friendly people", the first item in Factor II; the third item is the first from Factor III, and so on. Thus items from each of the factors are spread throughout the instrument. This also makes it possible for A.B.E. participants to score their own BEPS when provided with the easy-to-use

TABLE 1

THE BASIC EDUCATION PARTICIPATION SCALE (BEPS): FACTOR STRUCTURE AND ITEM MEANS

Items (abbreviated)	Mean	S.D.	-Factor Loadings-						
	(n = 257)		I	II	III	IV	V	VI	VII
Language improvement	1.81	1.27	.81**	-.09	-.23	.04	-.14	.08	-.07
Speak better	2.95	1.25	.79**	-.08	-.19	.05	.11	.06	-.07
Language	2.19	1.25	.77**	-.03	-.05	.12	-.04	.01	.05
Write Better	2.97	1.20	.74**	-.12	-.28	.03	.13	-.01	-.21
Say and write	2.79	1.22	.69**	-.18	-.21	.04	.13	.17	-.14
Customs	1.91	1.07	.61**	-.25	-.01	.02	-.30	.11	-.11
Friendly people	1.92	1.00	.19	-.53**	-.19	-.09	-.21	.17	-.18
Good time	1.76	1.00	.33	-.66**	-.05	-.04	-.18	.23	.05
Different people	3.14	1.01	.10	-.73**	-.03	-.02	-.03	.29	-.20
Make friends	1.95	.98	.10	-.78**	-.04	-.10	-.07	.32	-.06
New friends	2.24	1.06	.07	-.81**	-.06	-.08	-.07	.18	-.07
New people	2.33	1.02	.04	-.83**	-.02	-.08	-.13	.08	-.14
Supplement education	2.68	1.19	.08	-.04	-.53**	-.16	-.13	.17	-.33
Earlier education	2.69	1.23	.00	.07	-.59**	-.08	-.23	.18	-.31
Acquire knowledge	2.89	1.19	.31	.12	-.60**	-.02	-.07	-.02	-.26
Further education	3.15	1.10	.11	.26	-.71**	-.19	.04	-.00	-.16
Another school	2.80	1.32	.22	-.04	-.79**	-.13	-.07	.05	.01
Entrance	2.82	1.32	.15	-.01	-.80**	-.08	-.02	.08	.03
Professional advanc.	2.75	1.11	-.01	-.16	-.25	-.59**	.07	-.01	-.10
Occupational goal	3.40	.98	-.22	-.00	-.08	-.63**	-.02	-.07	-.22
Job preparation	3.02	1.12	-.13	-.18	-.12	-.64**	-.07	.23	-.04
Job status	2.75	1.21	.36	-.06	-.08	-.67**	-.11	.07	-.00
Better job	3.29	1.02	-.11	-.03	-.14	-.74**	-.08	.11	-.02
Job competence	2.99	1.12	-.05	-.00	-.06	-.81**	-.09	.13	-.10
Family Change	1.82	1.10	-.03	.05	-.04	-.13	-.40**	.25	-.26
Common interest	1.88	1.09	.26	-.29	-.14	-.18	-.40**	.07	-.12
Others in family	1.70	1.00	.17	-.17	-.18	-.07	-.56**	.22	-.08
Keep up with chn.	1.52	1.00	.17	-.01	-.01	.02	-.82**	-.03	-.04
Childrens questions	1.50	.95	.11	-.18	-.02	-.03	-.83**	.04	-.01
Talk with children	1.57	1.02	.17	-.15	-.05	-.08	-.83**	.02	-.03
Overcome frustration	1.79	.99	.05	-.19	-.13	-.23	-.02	.70**	-.10
Loneliness	1.56	.92	.13	-.32	-.14	-.05	.03	.65**	-.03
Relief from boredom	1.52	.87	.13	-.21	.03	-.03	-.09	.63**	-.01
Break routine	1.47	.83	-.07	-.13	-.03	.00	-.11	.63**	-.11
Do something	1.99	1.13	-.06	-.15	-.02	.00	-.02	.61**	-.26
Escape relationship	1.25	.71	-.07	-.06	-.07	-.11	-.05	.54**	.14
Meaningful life	2.85	1.13	-.12	-.07	-.24	-.27	-.08	-.08	-.57**
General knowledge	3.13	.92	.29	-.12	-.20	-.15	-.00	-.12	-.58**
Joy of learning	2.38	1.05	.07	-.04	.04	.27	-.10	.21	-.59**
Enquiring mind	2.94	1.09	.02	-.08	.00	-.08	-.03	-.02	-.59**
Seek knowledge	3.40	.98	.23	-.19	-.13	-.03	-.11	.03	-.60**
Expand mind	3.14	1.01	.05	-.07	-.19	-.13	-.00	.14	-.63**
Sum of squared factor loadings divided by sum of communalities			.1765	.1653	.1415	.1372	.1298	.1295	.1200
Percent of total variance accounted for			23.23	9.05	7.74	5.63	4.89	4.08	3.54
Cumulative proportion of total variance			23.23	32.28	40.02	45.66	50.56	54.64	58.19

BEST COPY AVAILABLE

scoring key. For research purposes, users will have to consider the extent to which they want to generate factor scores, that reflect the magnitude of each item's contribution to a factor, or scale scores derived by summing over responses made to each item in each factor. The remainder of this paper reports scale scores which can be calculated without recourse to a computer and which have now become the accepted way of proceeding in the motivational orientation literature. However, users of scale scores should realize that, to a certain extent, they upset the orthogonality of the factors.

Norms and Correlates

As noted above, each BEPS used in this study was accompanied by a cover sheet eliciting information on socio-demographic variables. "Communication Improvement" scale scores were derived by summing over responses to items 1, 8, 15, 22, 29 and 36; "Social Contact" scores were derived by summing responses to items 2, 9, 16, 22, 30 and 37. The remaining scale scores were calculated in a similar fashion. Mean scale scores for each sex are shown in Table 2.

TABLE 2

MEAN BASIC EDUCATION PARTICIPATION SCALE SCORES BY SEX AND LOCATION OF RESPONDENTS

		Communication Improvement		Social Contact		Educational Preparation		Professional Advancement		Family Togetherness		Social Stimulation		Cognitive Interest	
	n	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
A. King Edward '79															
Women	145	15.86	5.98	12.15	4.86	16.57	5.15	18.17	5.12	10.50	4.54	9.57	3.91	17.38	4.00
Men	112	15.36	5.85	12.41	4.95	17.33	5.25	18.29	4.13	9.39	4.06	9.55	3.61	16.58	4.27
Total	257	15.64	5.92	12.26	4.89	16.90	5.20	18.22	4.70	10.01	4.36	9.56	3.77	17.03	4.13
B. King Edward '83															
Women	34	19.55	3.38	15.08	3.61	19.14	3.02	19.05	4.51	10.94	4.27	12.08	4.48	17.29	3.62
Men	28	20.35	2.76	13.50	4.75	19.67	3.49	19.60	3.90	10.57	4.19	11.75	4.39	16.03	4.20
Total	62	19.91	3.12	14.37	4.20	19.38	3.23	19.30	4.22	10.77	4.20	11.93	4.40	16.72	3.91
King Edward subtotal	319	17.77	4.52	13.31	4.54	18.14	4.21	18.76	4.46	10.39	4.28	10.74	4.08	16.87	4.02
C. Lakeside Jail Inmates															
Women	21	12.66	4.65	10.38	4.40	16.23	5.36	16.76	5.17	9.76	4.07	12.61	4.86	16.95	4.88
Grand Total	340	16.07	4.56	12.33	4.49	17.50	4.59	18.09	4.69	10.18	4.21	11.36	4.34	16.90	4.30

For each factor, the minimum scale score is six, the maximum is 24. The means shown at the foot of the table were derived from the combined '79 King Edward, '83 King Edward and women's jail populations. Users who do not want to compare their respondents with a norming group that includes prison inmates should use the means and S.D.'s in the King Edward sub-total row. There were no significant differences between the mean scale scores of King Edward men and women. However, in 1979 East Europeans (X=20.20) and Asians (X=19.23) had significantly (F = 15.55, p .001) higher Communication Improvement scores than respondents born in Canada (X=12.58), West/South Europe (X=17.33), the Middle East (X=14.42), Latin America (X=17.85) or other countries (X=16.12). In 1979 respondents from Europe, the Middle East and Latin America were also more likely to be enrolled for Family Togetherness than were those from other countries (F = 2.85, $p < .01$). Persons born in Canada and Latin America had significantly higher Professional Advancement scores (F = 3.11, $p < .005$) than those from other countries. In the 1983 King Edward group 45 of the 62 respondents were from Asia. Thus the n in some cells was low but, in general, the relationships approximated those for 1979.

BEST COPY AVAILABLE

The 21 Lakeside prison inmates were all associated with A.B.E. programs offered through Douglas Community College. All but one said their "best" language was English. They were all women and had a mean age of 29.47 years (S.D. = 9.72 years). Their mean Communication Improvement scores (X=12.66) closely approximated that of the Canadian-born respondents in the 1979 King Edward group (X = 12.58). Their Social Contact score was lower than that of the "Canadians" (X=10.38 and X=12.01). Their Educational Preparation score was almost identical to that obtained by Canadians in the 1979 King Edward group; their Professional Advancement score was lower, their Family Togetherness score almost identical; as expected, the inmates Social Stimulation score was significantly higher than the one derived from the 1979 King Edward Canadians. With regard to Cognitive Interest, the inmates had slightly lower scores than the Canadians at King Edward.

Table 3 shows correlations between B.E.P.S. scores and age. Not too much weight should be placed on these results because 72 percent of the 1983 King Edward group were born in S.E. Asia whereas only 30.35 percent of the 1979 respondents were Asians. Because the 1979 group was the most heterogeneous their correlations will have greater external validity than those for 1983. In this group older respondents were significantly more likely to be enrolled for Communication Improvement and Family Togetherness and significantly less inclined to be enrolled for Professional Advancement than were younger Ss.

CONCLUSION

The Basic Education Participation Scale is factorially pure, and, in some respects, more psychometrically satisfying than the general form of the E.P.S. Items were inductively derived from Canadian A.B.E. participants and clustered into factors that appear to be content valid for populations in other parts of the world. The instrument can be scored by either researchers or respondents; early experience suggests that both find it easy to use. It will take time to compile norms based on widely scattered and hetereogenuous populations but, in the meantime, those derived from King Edward Ss provide a baseline against which other respondent groups can be compared.

REFERENCES

Boshier, R.W. Motivational orientations of adult education participants: A factor analytic exploration of Houle's typology. Adult Education, 1971, 2, 3-26.

Boshier, R.W. (Ed.) Towards a learning society. Vancouver: Learningpress, 1980

Boshier, R.W. Education Participation Scale. Vancouver: Learningpress, 1982.

Boshier, R.W. Basic education participation scale and scoring key. Vancouver: Learningpress, 1982a.

Boshier, R.W. & Collins, J.B. Education Participation Scale factor structure and correlates for twelve thousand learners. Proceedings of the Twenty Third Adult Education Research Conference, Lincoln, Nebraska, 1982, 26-35.

Boshier, R.W. & Peters, J.M. Adult needs, interests and motives. In Klevins, C. (ed.) Materials and methods in continuing education. Canoga Park: Klevens Pub. Co., 1976, 197-212.

Houle, C.O. The Inquiring Mind. Madison: University of Wisconsin Press, 1961.

Knowles, M.S. The modern practice of adult education. Chicago: Follett, 1980.

Listing of articles/dissertations reporting work involving the Education Participation Scale. Vancouver: Learningpress, 1982.

UNESCO. Third international conference on adult education, Tokyo, 25 July - 7 August, 1972: Final report. Paris: UNESCO, 1972

Williams, B. Structures and attitudes in New Zealand adult education, 1945-75. Wellington: New Zealand Council for Educational Research, 1978.

PURPOSES OF ADULT EDUCATION: AN INSTRUMENT AND MODEL

Roger Boshier and Veronica Nickerson*
University of British Columbia, Vancouver, Canada

Much debate concerning the purposes of adult education revolves around the extent to which it should be employed to satisfy individual or societal needs. Until 1945 it appears that most adult education was societal-centred; the prime motivation of those providing it was to ameliorate social problems and bring about reconstruction and reform. But between 1945 and 1972 learner-centredness was ascendant. Although it is part of an intellectual tradition that can be traced through Lindeman (1926) and Dewey (1914), its development was significantly helped by the emergence of Third Force psychology after World War II. Fromm, Maslow, Rogers and others spoke eloquently for the supremacy of the individual and the need to actualize human potentials. In adult education Havighurst's (1948) notion of "developmental tasks" provided a rationale for program planning. Third Force psychology also provided a foundation for group dynamics which Knowles (1980) and others parlayed into the notion of andragogy which is a radical exemplar of learner-centredness. Learner-centred approaches to adult education lay great stress on program planning, needs analysis and democratization.

OPEC quadrupled oil prices in 1972 and, for adult education, this was also the beginning of a new epoch. The Faure (1972) report spoke of lifelong education as a "master concept" and, in language reminiscent of the 1919 report, exhorted educators to attend to macro-level societal problems. Although social change would be wrought through individual learners, national, international and planetary needs were the primary preoccupation. In the same year the Club of Rome issued Limits to Growth (Meadows et al., 1972) and editors of Ecologist compiled their Blueprint for Survival. During August the Third World Conference (UNESCO, 1972) endorsed a list of societal-centred aims for adult education. Four years later the Nineteenth General Conference of UNESCO adopted eleven aims such as to promote peace and understanding of major social problems, awareness of interactions between people and their environments, a respect for diverse customs on both national and international levels, communication and solidarity at all levels. Societal-centredness was ascendant. With the worsening of what the Club of Rome now calls the "world problematique" adult education is more connected to other spheres of activity than it was when Clark (1958) labelled it marginal. Despite setbacks associated with global recession and the demise of urban-industrial capitalism, the standing of adult education has improved to a point where, in many parts of the world, it is central, rather than marginal, and intimately connected to social, cultural and economic policy. In many places, adult education is a crucial instrument employed to foster economic growth and political maturity.

The purposes of adult education can be portrayed on two axes which lie in an orthogonal relationship to each other (Fig. 1). As Boshier (1980) noted, these axes can be used to show the extent to which the purposes of adult education are learner or societal-centred. Adult education which is primarily (high) learner-centred is where the starting point and long term goal for the activity is to facilitate the self actualization of individual learners. The purpose of learner-centred adult education is to expand the physical, social, psychological, and intellectual horizons of participants for purposes not directly connected to any pressing social problem or macro-level need (see Pipke, 1981). Of course, in the long term, the widespread provision

---

*Department of Adult Education, University of British Columbia, 5760 Toronto Road, Vancouver, B.C. V6T 1L2, Canada. The S/L Inventory is under copyright and available from Learningpress Ltd., Box 46403, Station G, 3760 West 10th Avenue, Vancouver, B.C. V6R 2G0, Canada. Those not at AERC may secure Tables and Figures referred to in this article by writing to the senior author.

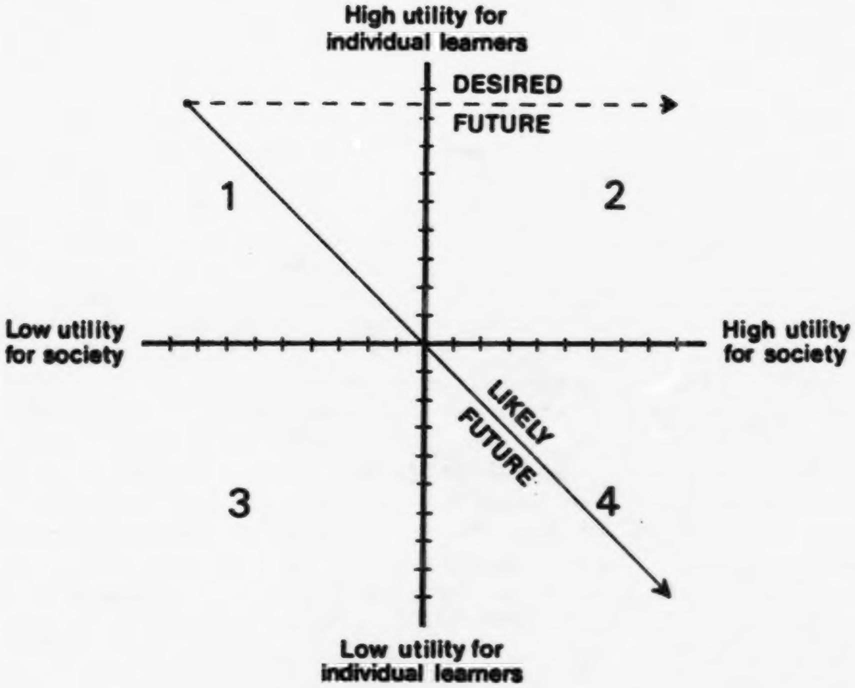


Fig. 1. Model to classify purposes of adult education

of learner-centred adult education (such as liberal studies programs that have been the mainstay of British adult education) will eventually have impacts on society. But the effects are postponed, indirect, difficult to measure and may be negligible. In contrast, adult education conducted for societal-centred purposes is designed to ameliorate or change some social condition or problem. Boshier (1980) discussed examples of adult education that fall into each quadrant in the model and argued that, because of the press of problems associated with the world problematique it was likely that future adult education would be located in quadrant four, rather than three. Quadrant four adult education activities have high utility for society but only indirect benefits for individual learners.

The Present Study

The aim of this study was to develop an instrument to measure educator's perceptions concerning the purposes of adult education. Preliminary work revealed that adult education administrators often have to allocate resources to learner or societal-centred activities. Few adult educators would consciously assign resources to activities in quadrant three that have low utility for both learners and society. Thus, for this study it was decided to focus on quadrant one and four and create an instrument that would measure responses when people have to decide to allocate resources to either societal or learner-centred activities. It was also decided to eliminate quadrant two activities from the instrument because many adult educators no longer have the luxury of creating programs or activities that have short and long term utility for both individual learners and society. Having regard to the foregoing, this study was designed to:

1. Create an instrument to measure the purposes of adult education as perceived by people in different parts of the world.
2. Create norms against which new populations can be compared.
3. Examine relationships between the perceived purposes of adult education and various socio-demographic and cultural variables.

METHOD

Item Selection and Format. Eight adult education experts (faculty members and senior doctoral students from the University of B.C.) brainstormed a list of learner and societal centred "activities" of a type found in most parts of the world. The experts, who came from Australia, Nigeria, the United States, Canada and New Zealand then discarded "activities" that appeared to be culture bound or ambiguous. This left 15 learner-centred activities such as craft and pottery, self development, home budgeting, planning for retirement, keeping fit, and 15 societal-centred activities such as environmental protection, pollution control, grassroots mobilization, international cooperation. The 15 learner-centred activities were then listed on a vertical axis, the 15 societal-centred activities on a horizontal axis. Then, in a strategy reminiscent of paired-comparisons methodology from psychophysics (see Osgood, 1953) each learner-centred activity was arrayed in a forced-choice format with each societal-centred activity. The first version of the S/L Inventory thus consisted of 225 items where on each item, subjects had to choose between a learner or societal-centred activity. Within items, the societal option was sometimes listed first, sometimes second. This first form of the S/L (societal/learner) inventory was administered to a group of Canadian adult educators described below as the (instrument) "development" group. After refinement it was administered to a number of "application" groups.

Development Group

The first version of the S/L Inventory was mailed to 150 names randomly selected from Who's Who in Adult Education in B.C. (PACE, 1977); 125 were returned in a form suitable for analysis; these were combined with 43 secured from 1981-82 graduate students enrolled in the Department of Adult Education at U.B.C. Data were entered into LERTAP (Nelson, 1974), a New Zealand computer program that calculates item x whole-scale correlations.

Application Groups

After the instrument had been refined the "final" form was administered to various groups for reliability and validation purposes. The location and identity of the validation groups is shown in Table 2. In addition, the instrument and a covering letter was mailed to 120 "expert" adult educators (like Paulo Freire, Malcolm Knowles and other "super judges") in East bloc, West bloc and developing countries.

RESULTS

Instrument Development and "Application"

S/L data for the 168 subjects in the instrument development group were entered into LERTAP which shows the number and percentage of respondents choosing each option (learner/societal centred) in each item and calculates the degree to which each item is related to the whole-scale score. For scoring purposes the societal option in each item was scored as "correct", the learner option as "incorrect". Thus, on the first version of the S.L Inventory a respondent consistently choosing the societal option could theoretically obtain a score of 225; a respondent consistently choosing the learner-centred option could obtain zero. On average, the 168 subjects chose the societal option 106 times (S.D. = 51.15); the highest score was 222, the lowest zero. Even with the 225 items, Hoyt's estimate of reliability (.99) showed that subjects made responses which were internally consistent. The instrument was refined by deleting all items whose point biserial item x whole correlation was less than .50. Whole-scale scores, and thus item x whole correlations, change when the test length is reduced. So new item x whole correlations were generated for the 40 "best" items retained from the previous step. These are shown in Table 1 along with unrotated loadings on the first factor generated from a principal components analysis. The final form of the S/L inventory is composed of the 40 items shown in Table 1. These all survived the development procedures. Note that out of 40 items the societal option came first 23 items; the learner option is first in the remaining 17 items. The items were scrambled so no scoring pattern was evident to respondents.

Reliability

The instrument development procedures attest to the reliability of the S/L Inventory since the only items to survive the LERTAP process were those with high item x whole-scale correlations. Nevertheless, extra steps were taken to ascertain the extent to which the instrument was internally consistent and elicited reliable responses over time. With regard to internal consistency, four strategies were adopted. In the first, items were related to whole-scale scores as described above. Table 1 shows item x whole point-biserial and Pearson product moment correlation coefficients for each item. All items were significantly correlated to the whole-scale score. In a second procedure, data from the development (n=168) and the application groups (n=133) were subject to a principal components analysis. For both the development and application groups all items had very high loadings on the first factor; moreover their signs were consistent with the manner in which they were scored (negative loadings are on items where the second option is the "societal" choice). These unrotated factor loadings also attest to the internal consistency of the instrument. In a third procedure odd-numbered items were correlated with even-numbered items for U.B.C. graduate students (r=.83, df=39), p <.001.), and the combined Hong Kong, Nottingham, Melbourne and Singapore group (r=.94, df=94, p <.0001). In the fourth procedure scores from the first half were correlated with scores for the second half. Both halves were significantly correlated for the U.B.C. group (r=.65, df=39, p <.0001) and the combined Hong Kong, Nottingham, Melbourne and Singapore groups (r=.84, df=94, p <.0001). Finally, an acceptable four week test-retest reliability coefficient was calculated after administering the instrument to a group of U.B.C. students. This was calculated by summing across the item test retest coefficients.

Validity and Norms

S/L (societal/learner) Inventory results can be graphically portrayed on two axes. On each item respondents must choose between a learner or societal-centred option. A score of 40 is a situation where a respondent chose the societal option 40 times and the learner option not at all. A score of 20 is a situation where a respondent chose the societal option 20 times and the learner option 20 times. The learner score is always a mirror image of the societal score. Thus scores can be arrayed along the hypotenuse of a right-angled triangle when the vertical axis is learner-centred (0-40) and the horizontal axis is societal-centredness (0-40). Thus people like Freire, who operate from a societal-centred posture ought to have a score on the lower slope, while Knowles, who is identified with learner-centred (andragogical) adult education should be located on the upper part of the hypotenuse (see Fig. 2). Moreover, educators from developing countries and those associated with the International Council of Adult education should have high scores while those associated with the human potential movement and other learner-centred parts of the enterprise should be low. In this brief report there is insufficient space to present all available validation data. Rather, the focus is on data used to create norms against which the "superjudges" can be compared. For norming purposes mean S/L scores were calculated for subjects in the development and application groups (Table 2). Next, relationships between S/L scores and various socio-demographic variables were examined. Interim norms based on data from 308 subjects are shown in Table 2. These data were gathered in British Columbia, Singapore, Australia, Hong Kong and England. The grand mean of 21.78 falls almost in the centre of the hypotenuse and suggests that, on average, the societal option is selected about half the time, and the learner option likewise. The Melbourne subjects were a fairly radical group of community workers; the Singaporeans were almost all trainers from business and industry, the Nottingham subjects were employees in the university extension/adult education department, the Hong Kong subjects were largely employees of Caritas, the large Catholic adult education and welfare agency.

Correlates of S/L scores for the Development Group

The 168 Canadians who completed the first form of the S/L Inventory also responded to a socio-demographic questionnaire that elicited information concerning their sex, age, educational qualifications, income, political preferences and behavior. Their total S/L score was derived by summing over the 40 items promoted into the final form. Relationships between S/L scores and the variables listed above were examined by generating a correlation matrix for interval variables and oneway analyses of variance for nominal variables. The 43 respondents who had erected a "political sign" on their property (X = 23.03, S.D. = 13.23) had significantly higher S/L scores (F = 4.10, p. < .01) than those who had not engaged in this overt political behaviour (X = 16.94, S.D. = 12.48). Moreover, the 53 respondents who had made a monetary contribution to a political party (X = 21.05, S.D. = 13.98) during the last five years had higher (F = 2.63, .10 < p < .07) S/L scores than those who had not contributed (X = 17.20, S.D. = 12.24). Clearly, erecting a political sign and making monetary contributions to a political party are not independent. Indeed, it was suspected that the variable common to both was membership of or commitment to the New Democratic (Labour) Party. This notion was examined by comparing the mean S/L scores of the 59 respondents who said they would generally support the Progressive Conservative Party (X = 16.69, S.D. = 11.67 with the scores of the 59 people who said they support the New Democratic Party (X = 23.06, S.D. = 13.53). The scores of Liberals and Conservatives were almost identical but significantly lower (i.e. less societal-centred) than those provided by N.D.P. supporters (F = 4.90, p < .008). This was an important result which partly attests to the construct validity of the S/L Inventory. These relationships were checked by entering all the available socio-demographic data into a regression equation designed to predict S/L scores. Table 3 shows that after the effects of erecting a sign and educational qualifications are accounted for, the effects of political preference are diminished. This equation suggests that those with the highest S/L scores had erected a political sign and had a lower educational attainment level and income than did those with lower S/L (i.e. more learner-centred scores.

Correlates of S/L scores for the Application Groups

The 1982-83 U.B.C. adult education graduate students were enrolled in the senior author's ED518 (Learning and Instruction) class. The cover sheet for the final form of the S/L inventory does not elicit information on political preference; rather it asks subjects to respond to questions concerning their age, sex, years working as a full or part-time adult/continuing educator, their major career, percentage of "working" hours spent as an adult educator, time spent on program planning, instruction and administration and office holding in regional, national or international adult education organizations. Table 3 shows the extent to which these variables had separate and joint effects on S/L scores. The regression equation for 1982-83 U.B.C. graduate students reached a multiple r of .49. Variables entering the equation had about the same separate effects on S/L scores. Those with the highest S/L scores (i.e. the most societal-centred) had more years working as an adult educator, spent less time instructing, more time on program planning, did not see adult education as their major career, had held office in an adult education organization, and spent less time on administration, than those with lower scores.

The 66 Singaporeans were largely trainers from business, industry, statutory organizations or the police academy. Their mean age was 29.63 years (S.D. = 12.51 yrs.). On average they had been working as full or part-time adult educators for 3.31 years (S.D. = 4.52 yrs.). They had a mean S/L score of 18.31 (S.D. = 8.76). Two variables yielded a multiple r of .31 before the cut-off criterion was reached in the regression equation (Table 3). Variables to enter were percent of time spent program planning (beta = .29) and major career (beta = -.20). Having regard to signs on the beta weights and the direction of scoring, it was concluded that those with the highest S/L scores spent more time on program planning and were less inclined to see adult education as their major career than those with low scores.

Fig. 3 shows S/L scores for "super-judges" from Scandinavia, West Europe, Great Britain, Canada, the United States, Latin America, Africa and Asia. The super-judges were chosen because their perceptions concerning the purposes of adult education are public knowledge. Although scores derived from Tough, Ohliger and suchlike are of great interest, so also are the S.D.'s. An examination of S.D.'s shows considerable unanimity concerning the purposes of adult education. Elsewhere, such as in Hong Kong, the disagreement (as measured by the magnitude of the S.D.'s) is quite considerable.

CONCLUSION

The S/L Inventory measures the extent to which the purposes of adult education are perceived to be societal/learner-centred. Although it is recognized that learner and societal centredness may still lie in an oblique rather than an orthogonal relationship to each other in some parts of the world, many adult educators have to make difficult decisions concerning resource allocation. While wanting to provide programs that have high utility for both learners and society, they often do not have this luxury. When resources are scarce they have to be allocated to either "learners" or "society". There is considerable evidence to suggest that the fourth epoch in the history of adult education began in 1972 and, since then, adult education has become more societal and less learner-centred. Learner-centredness was congruent with the ethos and narcissism of the 1960's but has since been eroded by the press of global problems associated with the world problematique.

The S/L Inventory is easy to complete, takes little time, contains items that straddle cultural boundaries and is psychometrically robust. It is internally consistent, unidimensional and appears to be reliable over time. With regard to validity, it appears to discriminate between people known on a priori grounds to differ with respect to the variable of interest. On the data set reported herein the mean falls in about the midpoint of possible scores while the S.D. is about half way between the mean and the lowest (or highest) possible score. In summary, the S/L Inventory appears to be an instrument with some utility for research and policy development. Moreover, it signals the beginning of a research tradition that focusses on adult educators for a change.

REFERENCES

Boshier, R.W. Toward a learning society: New Zealand adult education in transition. Vancouver: Learningpress, 1980.
Clark, B. The marginality of adult education. Chicago: C.S.L.E.A. Notes and Essays, No. 20, 1958.
Dewey, J. Democracy and education. New York: Macmillan, 1914.
Havighurst, R.J. Human development and education. New York: David McKay & Co., 1948.
Knowles, M.S. The modern practice of adult education. Chicago: Follett, 1980.
Lindeman, E.C. The meaning of adult education. New York: New Republic, 1926.
Meadows, D.H., & Randers, D.L., & Behrens, W.W. The limits to growth: a report for the Club of Rome's project on the predicament of mankind. New York: Universe Books, 1972.
Nelson, L.R. Laboratory of educational research test analysis package. (LERTAP), Dunedin: University of Otago, 1974.
Osgood, C. Method and theory in experimental psychology. New York: Oxford University Press, 1953.
PACE (Pacific Association for Continuing Education), A directory of who's who in adult and continuing education in British Columbia. Vancouver: PACE, 1977.
Pipke, I. Friend or burglar: program planners meet the future. Canadian Journal of University Continuing Education, 1981, 7, 2, 15-20.
UNESCO. Third international conference on adult education: final report. Paris: UNESCO, 1972.

METHODOLATORY IN ADULT EDUCATION RESEARCH : STRAW MEN AND FALSE DICHOTOMIES

Stephen Brookfield

Methodolatory

The term methodolatory is used by Alvin Gouldner (1967) to refer to the process by which social science researchers develop a slavish and uncritical adherence to a particular research methodology, irrespective of the success of that mode in producing new conceptual categories or advancing knowledge. He warns against the tendency of researchers to become 'methodolatorous' - "compulsively preoccupied with a method of knowing, which it exalts ritualistically and quite apart from a serious appraisal of its success in producing knowledge" (p.338). Perhaps the most serious consequence of methodolatory is the way in which it inhibits researchers from an individualistic, creative speculation about the nature of their research universe. In research terms investigators suffer from what Fromm called the 'fear of freedom' (1942); hence, a reliance on an apparently well proven research paradigm "sacrifices venturesome but chancy insight for the security of controllable routine, the penetrating novelty for the shallow familiarity, the broader for the narrow circumstances" (Gouldner 1967, p.338).

Inherent in the practice of methodolatory is the generation of false dichotomies and the erection of conceptual straw men. Researchers who believe they have discovered the methodological Holy Grail - that is, who believe that one particular methodological paradigm holds true for the investigation of all categories of human phenomena - will characterize other methodological stances as blinkered and misguidedly narrow. Adult education research, like much other educational and social science research, is bedevilled by a dualistic approach to the understanding of adults' teaching and learning transactions. The qualitative-quantitative division is the most famous conceptual divide but the actual practice of what is held to be good adult education is predicated on notions of humanistic psychology (as opposed to behaviourism) and andragogical conduct (as opposed to its pedagogical antonym).

Dept. of Higher & Adult Education, Teachers College,
COLUMBIA UNIVERSITY, New York, NY 10027

Qualitative and Quantitative Modes of Research

One of the most depressing aspects of methodological debates in the field of social science and educational research is the ease with which writers can fall into the trap of adopting a vituperative, almost hysterical tone in their arguments, thereby serving to obscure the validity of any propositions advanced. Anyone advocating the adoption of qualitative modes of research as appropriate for a particular substantive area is quickly cast as a champion of qualitative research and, by inference, as an opponent of quantitative research. This combative, adverserial approach is predicated upon the establishing of a mutually exclusive (and wholly false) dichotomy between qualitative and quantitative methods. As professional reputations develop so proponents of differing views become entrenched in their commitment to one side or the other. Their time is then devoted to sniping at opponents' views rather than (a) actually doing research and, (b) seriously considering the merits of alternative approaches. The following quotation illustrates this dichotomous, adverserial mode of discourse most aptly ...

> " If one sociologist makes a personal observation about an event, we call it a hypothesis, an opinion or a guess. But if a thousand less intelligent and less interested people can be inveigled into filling out a return postcard, the tabulated total is regarded as research. Personally, I would rather trust the opinion of one bright trained observer than those of a thousand indifferent fools " (Cameron 1963 p.28)

Superficially, this is an appealing and seductive paragraph. However, the language, tone and content all serve only to create an opposition between survey research (engaged in only by unintelligent, indifferent fools) and personal observation (the prerogative of insightful sociologists). This creation and maintenance of a methodological dualism in the investigation of human behaviour can be traced back to the genesis of the discipline of sociology. The last century witnessed the rise of Comtean positivism (in which social behaviour was judged to be accessible to investigation using the methods of natural science) and its antonym in the Weberian idea of 'verstehen' (the interpretative understanding of social action). Social scientists (including adult education researchers) have recast this schism in the form of qualitative versus quantitative methods.

The rationale underlying such polarities may be ontological and epistemological; that is, it may reflect a genuine and irreconcileable difference between contrasting views of the nature of reality and the most appropriate ways of understanding and expressing that reality. It is surely not too sceptical, however, to suspect that this kind of academic demarcation can also have a professional utility. Researchers have a self interest in perpetuating entrenched viewpoints regarding admissable methods and substantive concerns. A viewpoint is elaborated in a paper and prompts a number of refutations which, in turn, occasion replies to refutations. Individuals and departments become associated with particular perspectives and generate posts and publications out of this division.

This is not to argue for the imposition of an academic orthodoxy or a rejection of the advancement of knowledge through the exploration and possible synthesis of alternative viewpoints. It is rather to suggest that the advancement of knowledge is all too often conceived as occurring within methodological and conceptual tramlines. Methods, concepts and classificatory schema are devised and refined without reference to their qualitative or quantitative counterparts and the two camps are deemed mutually exclusive. The vitriol generated in this battle is well illustrated in Stanislav Andreski's denunciation of social sciences as 'sorcery' ...

> " It is a great pity that we do not have more works which, on the basis of careful and protracted observation, depict perceptibly the aspects of social reality which escape the questionnaires and statistics. The reason for this scarcity is the wide acceptance of the dogma that nothing is worth knowing that cannot be counted, and that information which is tabulated thereby becomes scientific - surely one of the grossest superstitions of our time, whose vogue can only stem from the fact that it enables a large number of people to make a living by indulging in easy pseudo-science " (Andreski 1972 p.111)

Methodolatory : Consequences for Research

The most profound consequence for the conduct of research which follows from a methodolatorous subscription to certain procedures is the determining of research problems by a prior commitment to methodology. Questions concerning what are to be regarded as important, relevant or profound problems for investigation become subordinate to considerations as to which phenomena, events, patterns of interaction etc. are most susceptible to investigation through a particular methodology. Instead of framing problems which assume a significance on their own terms because their investigation will lead to a better understanding of adult educational practice researchers, because of a prior commitment to a particular methodology, select a problem most amenable to study through survey research, grounded theory, or whatever happens to be the dominant methodological paradigm in their institutions or in the pre-eminent journals. If the road to publications, appointment and tenure is one signposted by, say, survey research, then postgraduate students, research grant applicants and junior professors cannot be faulted if the problems chosen for study are those which lend themselves easily to investigation within a quantitative paradigm.

In his classic The Sociological Imagination (1959) C.W. Mills lamented the 'abstracted empiricism' which he felt characterized much sociological research of the 1950's. Such abstracted empiricism resulted in a concern with narrow intra-institutional processes. Sociologists would conduct a host of isolated case studies which were, in methodological and substantive terms, so situationally specific as to preclude the development of theoretical generalizations. The methodolatorous attachment to quantitative survey research in the 1960's and 1970's has certainly promoted a variant of abstracted empiricism within adult education research. In particular, I would suggest that there has been little attempt to link (in Mills's words) private troubles and public issues. Such a dysjunction may also come to infuse the recently popular application of grounded theory. In their emphasis on real world conditions, on immersing themselves in data, and on eliciting subjects' definitions of relevance, grounded theory researchers run a risk of failing to link such perceptions and subjective experiences to wider issues.

Conclusion

The definition and conceptualisation of what constitutes a research problem frequently says more about the definer than it does about what are the research imperatives facing adult educators. Whenever adult education professors, journal editors or grant awarding bodies decide that a particular methodology has an assumed innate superiority, and that research must observe the rules enshrined within that paradigm, then the selection of suitable problems becomes a function of a methodolatorous devotion to a particular research procedure. In my own experience this has bedevilled many a dissertation proposal. Students approach me with a battery of statistical tests, with neatly delineated control and experimental groups, with apparently impeccable pre and post test measurements, and with a research 'problem' which shows every sign of having been conceived first and foremost as an opportunity to allow the student to exhibit a mastery of statistical techniques learned in a previous semester's empirical research methods course.

This methodolatorous attachment to a particular research paradigm results in abstracted empiricism of the worst kind. In the pursuit of a spurious professional relevance, and as the exemplification of an apparent scientism, problems are conceived which encourage a narrow intra-institutional preoccupation. This focusing on applied professional concerns - what Mills would regard as the divorce of private troubles from public issues - means the avoidance of issues of major social and political concern as subjects for adult education research. The extent to which formal adult education functions as a barrier or enhancement to social mobility, the relationship between adult education and movements pursuing social justice (the Civil Rights or Peace Movement for example), the contribution adult education can make to increased political literacy - such questions rarely appear as research problems in doctoral dissertations or professional journals. From the movement which, in America, Canada and Britain, was grounded in social concern and the creation of a just society, which produced The Meaning of Adult Education (Lindeman 1926), the 1919 Report, the Antigonish movement, the Highlander Folk School, and the Workers Education Association, this is a cause for considerable lamentation.

It is to the credit of adult education as a field of research that many of its acknowledged leaders have rejected methodolatory and have advocated triangulation or methodological pluralism. For example, although doctoral committees, tenure review boards and journal editors might look askance at qualitative methods, adult education luminaries have acknowledged that qualitative and intuitive modes are admissable and appropriate. Apps (1973) has proposed that adult educators should research evaluative and prescriptive questions and Griffith (1979) believes that debate on the merits of inductive, qualitative and participatory research methodologies could breathe new vitality into adult education research worldwide. The late Roby Kidd criticized the mutually exclusive nature of debate on qualitative and quantitative modes of research and condemned the "bland, homogenized, deodorized, anaesthetized prose with which we report most educational experiments, inventions, innovations" (Kidd 1981 p.3). He argued that "it is not possible, and may never be possible, to assign consistent numerical weights to all human attributes such as love, fear, rage, wonder, hope, responsibility" (ibid p.5). As I have documented elsewhere (Brookfield 1982) the research conducted by first line troops, and which appears in theses, professional journals, and registers of research, does not exhibit this admirable humanity and openess.

References

Andreski, Stanislav Social Sciences as Sorcery London: Andre Deutsch, 1972

Apps, Jerold W. "Toward a Broader Definition of Research" Adult Education 23 (1973): 59-64

Brookfield, Stephen D. "Adult Education Research : A Comparison of North American and British Theory and Practice" International Journal of Lifelong Education 1 (1982):156-167

Cameron, William Bruce Informal Sociology New York: Random House, 1963

Fromm, Erich The Fear of Freedom London: Routledge & Kegan Paul, 1942)

Gouldner, Alvin Enter Plato London: Routledge & Kegan Paul, 1967

Griffith, William S. "Adult Education Research - Emerging Developments" Studies in Adult Education 11 (1979):125-144

Kidd, J.R. "Research Needs in Adult Education" Studies in Adult Education 13 (1981): 1-14

Lindeman, Eduard The Meaning of Adult Education Montreal: Harvest House, 1961 (orig. published 1926)

Mills, C. Wright The Sociological Imagination Harmondsworth: Penguin Books, 1959

I. The Perry Scheme: A New Perspective on Adult Learners

Susan W. Cameron, Ph.D.
Syracuse University

II. Introduction

The investigation of the intellectual development of adult learners is a topic that is both timely and relevant to educators. It is timely in that the adult population is returning to post-secondary institutions at an accelerating rate, and most institutions are turning to this population to fill enrollment quotas as they become aware of the decline in the traditional age student. Investigation of the intellectual development of adults is relevant because we need diagnostic tools to meet the learning needs of the returning adult students. We cannot assume that individuals are at the higher stages of intellectual development because they have reached a mature chronological age. The college impact literature to date has addressed the development of the 18-22 year population far more adequately than it has addressed the adult population who are returning to school after experiencing the world of work/home-making for 2-20 years. We need to know more about the adult students whom we teach in order to be more effective teachers.

William Perry's developmental scheme has generated interest among higher educational professionals within the past decade. Developed at Harvard and tested on undergraduates in longitudinal study, Perry's theory of intellectual and ethical development forms a base for holistic testing of non-traditional learners. Although Perry developed his scheme from the observation/interviewing of traditional college-aged, Ivy-League students, he pointed to questions that superceded this population.

> Can this scheme be considered a relatively enduring outline of major vicissitudes in human experience from adolescence into adulthood in a pluralistic culture? Does it help us understand the way that "modern man" finds to address his predicament in a relativistic world? (Perry, 1970, p. x)

Only from repeated studies in diverse settings, with diverse populations can we begin to develop answers to these questions. The Community College is an ideal institution from which to begin a holistic adult testing program. The Community College has always viewed adult learners as a significant focus of their mission to the lifelong learning needs of the community.

Purpose of Study:

The purpose of this study is to describe in detail, using the Perry Cognitive development framework, the cognitive positions of adult students in their first year in two year colleges and to suggest how these findings might be used to discuss faculty redirection. Adult learners will be defined as persons who enter college following several years of other activities, such as job, military, mothering, and is therefore older than the traditional age student.

Address:
Dr. Susan W. Cameron
355 Huntington Hall
Syracuse University
Syracuse, New York 13210

Conceptual Framework

Of central interest in the work of William Perry is the sequential development of the student's cognitive structure through nine positions of intellectual and ethical development. Within that scheme, cognitive structure is defined as "essentially a set of assumptions which act as a filter dictating how the individual will perceive, organize and evaluate events in the environment, and, though less directly, how he/she will behave in response to those events" (Widick, 1977, p. 35). Perry describes the nine major positions of intellectual and ethical development grouped into three general categories: Dualism, Relativism, and Commitment.

Within these three general categories, this research measures the patterns of adult intellectual filters as they view knowledge, authority and themselves.

Positions one and two in the Perry Scheme represent a dualistic view of knowledge. The person in a dualist position assumes knowledge is either known or knowable and views himself as a receptacle ready to receive knowledge/truth from the authority/teacher who is required to give it to him. This student views the world in polar terms of we/they, right/wrong. Right answers exist for everything and are known to authority whose role is to know this truth and teach it. Perry researchers often refer to this view of authority as a belief structure held by the learner in which authority begins with a capital A.

The learner with a dualistic world view views knowledge as "out there," as a set information and facts. His responsibility is to master the facts and demonstrate to the teacher that he has done so. As the student moves along within a dualistic structure, he accounts for uncertainty and diversity of opinion as confusion among poorly qualified authorities who should know, or as tasks set by authority so the students can find the right answers for themselves. (Knefelkamp, L.L. and Slepitza, R., 1976.)

Positions Three and Four represent a move toward multiplicity. Learners can incorporate more diversity of opinion, more multiples. Now a rapidly expanding gray area encroaches on the black and white Realm of Dualism. The learner recognizes that in some areas uncertainty and diversity of opinion are legitimate. At the early position, students are concerned with quantity--time spent on preparation, number of pages, weights of evaluative areas for grading. Students become concerned with issues of fairness. A natural, but hardly positive, manifestation of this position is what Perry has referred to as the "do your own thing" perspective. The student sees that he has no direct access to absolute truth, that the world he perceives is filtered through a particular frame, and that frame is only one of a variety of possible frames. He then infers that he is unable to evaluate another's views or beliefs; he is free only to agree or disagree. Beliefs become individual preferences. Even though the student is no longer a mere receptacle for authority's wisdom, he may still believe that opinions are determined rather than chosen. (Clinchy and Zimmerman, 1981)

At Position Four, students may believe that each teacher has an arbitrary, idiosyncratic way of thinking. Teachers try to inflict their personal styles on students. Many students feel angry and helpless. Students at this position do not use reason to construct their opinions. They see reasons as manufactured to please instructors; they do not convince the student. The student believes he takes a position that is "simply there" (from experience) or he selects one that is appealing to him. However, he is beginning to realize that what instructors want is complex, contextual reasoning and he must learn how to evaluate arguments in terms of formal criteria. Analytic tools make rational criticism possible.

The movement from dualistic thinking to relativistic thinking comes about gradually with gradations through Positions 1-4. Contextual relativism (Position Five) in the Perry Scheme is marked by what Perry refers to as "revolution." In the thought structure of the student, "Relativism is perceived as the common characteristic of all thought, all knowing, all of man's relation to his world." Against this pervasive field of contextual relativism, one perceives dualistically right or wrong thinking and even "ideas of absolutes" as special cases. Relativistic thinking becomes habitual over a period of time. All areas of life require a contextual approach and no matter what the situation the learner constructs a variety of interpretations and evaluations. The answer to everything is, "it depends." Questions require examination from many perspectives. The learner now knows that complexity is real and he now has the tools of analysis and synthesis to match the complexity of the world. The learner must now make meaning for himself, knowledge can no longer be received from "on-high." At Position Five the learner can take on the responsibility for his own learning and accept information from other sources to construct one's own knowledge.

III. Methodology

The Syracuse Rating Group, a professional group of experts on rating learner responses on the Perry development scale, developed and validated an essay test (protocol) for use with adult students attending a local community college. Students tested were age 22 or older. This age was chosen for two reasons: (1) in the literature the traditional age college student is generally considered to be 18-22, and (2) Levinson's first adult stage of "leaving home" generally encompasses ages 17-22. Therefore we expect most of our respondents will have completed this task.

This protocol instrument was used to test 50 adult students in Fall, 1982; these essays were rated along positions on the Perry Scheme. Two independent raters read the essays and gave a three digit rank on dimensions of how respondent viewed knowledge, authority, self. These ratings were then merged into a final three digit rating for each responsdent. Correlation coefficient for N=46 was .87. Check coding by a third Perry expert was done for every fifth respondent. Interviews were conducted with six respondents to further check ratings.

The interviews were one-half hour long, were used to get more information on responses that raters judged were unclear. The original protocol asked students to describe their ideal learning environment. The protocol used in the interview proposed a conflict situation regarding knowing/authority/self and asked students to discuss their reactions to this situation. In each case, the interview rating confirmed the conditional rating given to the original response.

Findings:

The ratings for the sample (N=46), the first group analyzed, were distributed in the following way:

Table 1

Percentages of Adult Students on Three Positions of Perry Scheme of Cognitive Development (N=46)

	No.	Percentage
Dualist	29	63.3%
Multiplist	12	26.0%
Relativist	5	10.8%

Students who were classified as dualist in their view of reality are those who were rated by the Syracuse Rating group as position two and position three. Three ratings on dimensions of knowing, acting and learning environment were assigned to each respondent. Typically a dualist thinker might have a statement in the essay that borders on a higher level. Often students are rated 233, or 334 which means that they are in early stages of transition to the next stage. In this sample all students who had position 4 rating in any dimension were included in the multiplist category. From table 1, 63% of this population has a dualist world view, while only 10.8% or 5 of the respondents were relativists. However from a first sub-set analysis, the students enrolled in business programs had a different profile. Areas represented were Business Administration, Data Processing, Accounting, Computer Science, and Business Counseling. Of the 15 respondents in business programs, the distribution looked like this:

Table 2

Percentage of Adult Students on Perry Scale of Cognitive Development by Program (N=46)

	N=15 Business Program		N=31 Liberal Arts and Human Services	
	No.	Percent	No.	Percent
Dualist	(7)	46.6%	(22)	70.9%
Multiplist	(6)	40%	(6)	19.3%
Relativist	(2)	13.3%	(3)	9.6%

Although caution must be exercised in generalizing from too small a sample, for this group at least, over 50 percent of students who had made a choice of a business program, were at a multiplist or relativist position on the Perry Scheme. In addition, the business adult students were generally more advanced multiplists, firmly in position four, than the liberal arts/human service adult students. A larger number of these latter students, classified as multiplist, were in the transition toward multiplism.

The age relationships were also interesting since it is often believed that growing older accounts for stage development and task undertakings. We don't really know the whole story on the relationship of age to development. In our relativist category, the average age was 41 years yet the range was 28-48 years. Average age for business program relativists was 32; average age of relativists in liberal arts/human services is 45 years. In the multiplist category, the average age was 34.5 years, yet the business program adults showed an average age of 30.6 years while the other programs showed a 37.5 age average. Students enrolled in business programs in general reached a multiplist stage/or relativist stage at an earlier age than the other students in this sample.

The age range for the twenty-nine respondents at the dualist stage is 22 50 years. The group enrolled in business programs averaged 28 years while the other group averaged 36.5 years of age. The results on age are consistent at each position; adult students enrolled in business majors are younger than the other students in the sample and the business majors are generally at a higher stage of cognitive development. One explanation for this result is that because the business students have narrowed their choice for a career, they also have more self-awareness and are better able to address personal needs, which is a characteristic of a multiplist position. However, almost half of the business students are still in a dualist position.

The findings on stage of cognitive development for this sample of adults reminds us of a number of things about development and instruction. We know there is diversity within the population of adult students, but faculty have been slow to respond to this new clientele. They have been reinformed mainly for teaching content regardless of who attends their classes. With the understanding of different cognitive frames of relationships, faculty can also interpret students' very different responses to course content, academic environments and ability to be successful in their coursework.

Although many more samples need to be drawn from the population of adult students in different insititutions to verify their frames of reference, or filters on reality, this sample suggests to us that we approach their instruction in ways consistent with needs for high structure and high reassurance. We would expect students to be dependent on the instructor; to have external orientation, a high need for approval, and an absence of self-awareness of individual learning needs. These students who are dualists, will not be capable of self-directed learning, even though they can be encouraged to be more and more self-directed. Peers will be used as helpers to clarify, to remember, to recall.

One example of a dualist learner was a 47 year old woman we interviewed who felt there is an answer "out there". Somebody else will know. In the learning environment she is frustrated because she cannot do what "they" want. When she says during the interview, "you need help", she is distanced from involvement. What she is really saying is "help me", but she is not secure enough to personalize it yet. One almost senses for this student her view of knowledge is holding her back. She keeps "peeking around the corner" toward the next stage, but cannot turn the corner without more support and security.

A number of these adult students, with the proper balance of support and challenge, will no doubt progress in cognitive development. They may progress more rapidly than the traditional students because of the experience dimension. What is needed for these students are instructors who look at structural development as a way of organizing the teaching/learning environment. Instructors need to become more flexible in their roles, moving from demonstrating and enforcing, to validating the individual student, to being a role model and evaluator of competencies, to being a facilitator or guide for students' emerging levels of insight. Students will also learn from this role flexibility.

BIBLIOGRAPHY

Clinchy, B. and Zimmerman, C. "Epistemology and Agency in the Development of Undergraduate Women" In The Undergraduate Women, Issues in Educational Equity (Ed.) P. Perun, 1981.

Knefelkamp, L.L. and Slepitza, R. "A Cognitive-Developmental Model of Career Development: An Adaptation of the Perry Scheme", The Counseling Psychologist, 1976, 6(3), 53-58.

Perry, William Forms of Intellectual and Ethical Development in the College Years. New York: Holt, Rinehart & Winston, 1970.

Strange, C.C. "Intellectual Development: Motive for Education and Learning Styles During College Years: A Comparison of Adult and Traditional-Age Students." Unpublished Doctoral Dissertation, University of Iowa, 1978.

Weathersby, R.P. "Education for Adult Development: The Components of Qualitative Change" New Directions for Higher Education (29), 1980.

Widick, C. "The Perry Scheme: A Foundation for Developmental Practice." The Counseling Psychologist, 1977, 6 (4), 35-38.

MARY CHARUHAS
NORTHERN ILLINOIS UNIVERSITY

Adult Adquisition of Formal Operation

Jean Piaget's studies on the cognitive development of children have had profound affects on educational thinking in the United States and Western Europe. Since his works are limited to the ages of birth through twenty years, all but a few adult educators have applied his theories to adult population.

Jean Piaget identified himself as a genetic epistomologist. His early work in biology combined with his later work with Binet on intelligence testing led him to examine the incorrect answers in children's responses to the reasoning tests. The combination of biology and psychology led him to the position that formal structures or logical reasoning ability are not innate, that the mature nervous system is a necessary but not a sufficient explanation for development; nor are cognitive structures explained by society imposing them on the individual. They are instead, the result of the equilibrium which arises between the individual, society and the physical environment. Briefly, his theory states that knowledge is the evolving relationship between a person's physical experience and the psychological structures he places on those experiences which are then organized into a coherent system. This as adaptation. Adaptation consists of the twin processes called assimilation which is the individual taking in information and organizing that information into pre-existing structures and accommodation which is the process of the individual modifying those structures to cope with new information and feedback from external situations.

He identified four factors which influence the development of cognition. They are maturation, experience, social transmission and equilibration. Maturation refers to the physiological growth which provides the potential for assimilation. Experience provides two kinds of knowledge: physical knowledge which comes from acting on and observing objects and logicomathmatical knowledge which is derived from recognizing the logical relationships between and among objects. The third factor is social transmission which is information learned from the individual's social groups. The last and most important factor is equilibration which regulates and coordinates the other three and creates a balance between assimilation and accomodation. Equilibrium is never maintained for long because the individual is constantly bombarded with new information which requires both assimilation and accomodation. Thus, the effect of equilibration is a continual process which results in bringing the cognitive development of the individual to a higher state.

Piaget's theory identifies four stages of cognitive growth: the sensorimotor stage, the pre-operational stage, the concrete operational stage, and the formal operational stage. Each stage is identified with an age group, but those ages are only approximations. It is the sequence of the stages which is unchanging.

1. The first state is the sensori-motor stage (0-2 years) where the infant mainly reacts to the environment with physical responses.

2. The second stage is the pre-operational stage (2-7 years) where the child begins to cope with the world in a symbolic way through imitations and words.

3. The third stage is concrete operations (7-11) where the child develops the logical structures for manipulating groups. This includes the logic of classes and the logic of relations. The logic of classes includes understanding part/whole relationships, reverse operations (A+B=C therefore C-B=A), identity (A+O=A and AX1=A), and associativity (A+B=B+A). The logic of relations includes developing of seriation (A)B and B)C then A)C) and the use of matrix to form combinations.

4. The final stage in Piaget's theory of formal operations (12 to 20) At this the level the adolescent is able to reason according to the form of a proposition and ignore the content. This allows him the opportunity to think about thinking and not have to refer to concrete objects. The formal operator can consider all the combinations and permutations of all the elements in a problem. He can reason with proportion and propositional logic.

The research seems to revolve around five areas: establishing the acquisition of formal operations in adults, responding to an article by Piaget attempting to explain the reasons for the lack of experimental support for acquisition of formal operations, studying the acquisition of formal operations over the life span, examining formal operations in the aged, and examining propositional logic.

Acquisition of Formal Operations

In Roberge and Flexner (1979) a comparison of formal operations for adults and children (eighth grade) found that 50% of the children and only 67% of the adults operated at the formal operations level. Schwebel's (1975) research results found that 20% of his colledge students operated at formal operations and 63% operated at concrete operations. This confirms Trowler and Wheatly's (1972) reports that only 61% of the college students had abstract knowledge of conservation. Dulit (1972) reported that only 33% of his sample of 12 adults achieved formal operations on the rings test and 25% on the liquids test. Papalia (1973) demonstrated that only half of her 100 subjects between the ages of 18-19 were able to conserve number More evidence in the difficulty of achieving formal operations comes from Arlin (1975) who in determining a relationship between problem solving and problem finding found only 52% of her college seniors were formal operators. Coleman (1973) in her cross-sectional study of women between 20 and 94 years noted that 50% of the lower aged groups scored at or below concrete operations. McCrary (1978) demonstrated that of the 40 white housewives between 46 and 68, none were functioning at the level of formal operations. The only contradiction to these findings is a research study by Lawson who found that 90% of his college freshman pre-service teachers were able to conserve volume using the clay test.

Response to Piaget's 1972 Article

As a result of the controversial experimental results on Piaget's fourth stage, Piaget (1972) stated that formal operations may not be completed until the child reach the age of twenty. He offered three hypotheses as possible explanations for the research. The first, and possible explanations for the research. The first, and least likely, was that not all the people are capable of achieving formal operations. The second hypothesis is that achieving formal operations is a function of the frequency and quality of intellectual stimulation. The third hypothesis is that formal operations is in fact achieved by all people but that is is acquired in different areas of specialization. Of the three hypothses only the last has been explored. Bart (1971), Roberge and Antonak (1979), and Mason, et.al. (1975) each examined vocational interest and its effect on propositional reasoning and found no relationship.

Life Span Evaluation of Formal Operations

The research finding which discuss the acquisition of formal operations during a lifetime are limited. Hooper et.al. (1971) in his review of the literature on intelligence and aging, suggested a curvilinear relationship between complex and abstract processes and aging across the lifespan. "One could predict a sequential order of functional regression which would involve the formal period tasks first and the concrete operational skills at a later point. Papalia (1973) confirmed this in her cross-sectional research of 96 middle class people ranging in age from 6 to 80. She noted that understanding formal operations increased through childhood, reached a peak between 55-64 and declined in subjects over 65. Coleman (1973) in her study of women aged 20-94 found a similar curvilinear relationship. Tomlinson-Keasey's (1973) cross-sectional study of 89 women between 11 and 54 found peak understanding was reached by college aged adults with 67% operating at formal operational level while only 54% of the women aged 54 and older operating at that level. Storck's (1974) cross-sectional study of 180 people found that Piaget's operations followed that of Cattell's fluid intelligence which reached its peak in the earlier years and declined in the later years. Denny (1972) found a significant difference in classification skills between people 25-55 and 67-97, with the older group unable to classify according to a rule.

Rubin (1976) confirmed the curvilinear pattern described by Hooper by testing 180 males and females aged 7 to over 80. To confound the effects of cross-sectional study on life span questions he pre tested all his subjects for acquisition of formal operational abilities, then taking only those subjects who in fact demonstrated that they had achieved formal operations, he attempted to extinguish those skills through incorrect feedback. He found only the very young and the very old were likely to change their responses to non conserving ones. Thus, he rationalized that the decrease in ability was in fact a result of aging and not of the research process.

Formal OPerations and Old Age

Papalia et.al. (1973) demonstrated that formal thought may be subject to regression and qualitative disorganization with age. That same year Papalia (1973) reported in a study of 48 white subjects 54-84 years old that 66% conserved substance, 43% conserved weight, and only 20% conserved volume. Hornblum et.al. (1976) confirmed the low achieving scores of elderly women 65-75 years old. However, in the second part of her experiment, the group of non conservers were offered feedback when they made correct and incorrect statements. The results were statistically significant improvement on their scores.

Contrary findings of conservation ability with older adults were produced Hughston and Protinski (1973) Their results showed that 90% of their subjects conserved mass, 75% conserved surface area and 91% conserved volume. These findings were confirmed by Chance et.al. (1978) They found that 100% of the elderly conserved weight and mass, 94% area, and 76% volume. They credit their high score with their positive approach to the testing situation and the deliverate effort to create a relaxed atmosphere.

Combinatorial Reasoning and Propositional Logic

Another strand of research has been the evaluation of formal operations based on propositional logic and combinatorial reasoning. In combinatorial reasoning in the statement "If P then Q" the following propsitions are true (P,Q), (P,Q), (P,Q). Where P stands for not P and Q stands for not Q. There is only one false proposition and that is (P,Q). Therefore, the only way to make a valid inference depends on the possibility of not finding (P,Q) and as a result verifying the conditional statement.

The first strand of this research (Wason and Johnson-Laird, 1969) was based on the use of cards which had different symbols on each side. The experimenters then have the students a test questioning the form of "Every card which has a red triangle on one side will have a blue circle on the other." The subjects were given four cards one with a red circle, one with a red triangle, one with a blue circle, and one with a blue triangle. To prove the statement the subject needed to choose the red triangle (P,Q) to show that the blue circule was on the other side and the red circle (P,Q) to show that the blue circle was not on the other side; approximately half of the college students in the experiment were unable to correctly select the correct combination. Wason and Johnson-Laird (1970) followed this with another joint project. They had the subject evaluate their decisions determining the truth or falseness of the rule generating statement by examining both sides of the cards, 63% of the subjects, when a conflict between the selection and the evaluation occurred, 63% of the subjects were able to correct their originally incorrect decision.

Wason and Shapiro (1971) continued this line of research confirming the tendency that students prefer to consider verification (P,Q) over falsification (P,Q). This experiment required that the group which had to predict what would be on the other side made more correct selections than those asked just to turn the cards over.
In their second experiment, they introduced the material in a more realistic manner to the experimental group and in a symbolic manner to the control group. The thematic group scored statistically significantly better. This was confirmed in studies by Goodwin andWason (1972), Johnson-Laird, Lengrenzi, and Lengrenzi (1972), Van Duyne (1974) andGilhooley and Falconer (1974).

Roberge (1971a) demonstrated through a written test of abstract propositions that many adults had not reached formal operations in propositional logic. Roberge (1976) and (1977) research confirmed these findings.

In evaluating this research, one of the most important considerations is the fact that there is very little consistency on the definition of formal oeprations. Many of the studies defined their work as the study of formal operations but described what seem to be concrete operations. It is important to also consider that the majority of the research on acquisition of formal operations and propositional logic has been done on college populations.

All the life span and agining research is cross-sectional. Virtually no controls were placed on the experimental groups for variations in educational levels in the population, socio-economic levels, or vocational expertise were included. Noe of the research discussed survivor biases, only a few considered sex, and one mentioned terminal drop as a possible explanation of differences. All but Rubin assumed that the older subjects had at one time acquired formal operations then lost them. With the low percentages of college students having acquired formal operations this is a doubtful assumption. Another difficulty is the lack of definion for old age. Old age in most of these studies is as young as 65 and as old as 90. Very little attempt is made to break down that 25 year span to determine when the changes in cognitive skill takes place. Conflicting results in performance in all the research were explained away by testing procedure. The procedure should probably be examined more closely and be standarized.

Conclusions

If the general results of the acquisition of formal operations is approximately 60% for college level students, questions shouls be raised about the assumptions adult educators make when bringing the adult into the classroom. The importance of bringing in the adult's personal experience into the educational setting may not be just a method of teaching but possibly a major approach to helping the adult bridge the gap between concrete and formal operations. If a large number of adults are not operating at the formal level, the concept of self directed learning may need to be re-examined. Adult education will have to focus on the difficulties of the non-formal operator in understanding the theory underlying the experience. Lack of formal operations may affect the kinds of knowledge the individual obtains on his own. The research findings on the curvilinear relationship of thought and aging are contradictory enough to throw some doubt on the idea of regression of cognitive skill. It does tend to indicate that the environment in which the individual is placed has some affect on the results. There is some evidence that form operations can be developed through training. In both the propositional logic and the aging research, the subjects made marked improvement in their scores when they were given feedback about their responses. More research needs to be done to explore what kinds of situations create improvement in formal operations. More concern needs to be given to the function of formal operations in adult education situations. Literacy campaigns may be ignoring a vital strategy in developing both reading and survival skills for their clients by not considering cognitive development. Continuing professional development may be making the same mistake.

References

Arlin, P.K. cognitive development in adulthood: A fifth stage?. Developmental Psychology, 1975,11,602-606.

Bart, W.M. The effect of interest on horizontal decalage at the stage of formal operations. Journal of Psychology, 1971, 78, 141-150.

Chance, J., Overcase, T. and Dallinger, S. Aging and Cognitive regression; contrary findings, *Journal of Psychology* 1978, *98*, 177-183

Coleman, S.B. the effects of aging on Piaget's developmental stages: A study of cognitive decline. Unpublished doctoral dissertation, Temple University, Philadelphia, 1973.

Denny, N. and Lennon, M. Classification: A comparison of middle and old age. *Developmental Psychology*, 1972 *7*, 210-213.

Dulit, E. Adolescent thinking a la Piaget: The formal stage. *Journal of Youth and Adolescence*, 1972, 1, 281-301.

Goodwin, R. Q. and Wason, P.C. Degrees of Insight. *British Journal of Psychology*, 1963, *63*, 205-212.

Hooper, F. Fitzgerald, J. and Papalia, D. Piagetian theory and the aging process: Theories and extensions. *Aging and Human Development*, 1971, 2, 3-20.

Hornblum, J. N. and Overton, W. F. Area and volume conservation among the elderly: Assessment and training. *Developmental Psychology*, 1976, *12*, 68-74.

Johnson-Laird, P.N., Lengrenzi, P., and Lengrenzi, M.S. Reasoning and a sense of reality, *British Journal of Psychology*, 1972, *63*, 395-400.

Mason, E. J., Bramble, W.J., and Mast, T.A. Familiarity with content and conditional reasoning. *Journal of Educational Psychology*, 1975, *62*, 238-242.

McCrary, K. J. Effects of selected environmental factors on cognitive functioning in adults. An unpublished doctoral dissertation. University of Georgia, Athens, 1978.

Papalia, D. The status of several conservation abilities across the life-span. *Human Development*, 1972, *15*, 229-243.

Papalia, D.E., Salverson, S.M., and True, M. An evaluation of quantity conservation and performance during old age. *International Journal of Aging and Human Development*, 1973, *4*, 103-109.

Piaget, J.P. Intellectual evolution form adolescence to adulthood, *Human Development*, 1972, *15*, 1-12.

Roberge, J.J. Effects of content on inclusive disjunction reasoning. *Quarterly Journal of Experimental Psychology*, 1977, *29*, 669-676.

Roberge, J.J. Effects of negation on adults comprehension of allacious conditional and disjunctive arguments. *Journal of Psychology*, 1976, *91*

Roberge, J.J. Analysis of response patterns for conditional reasoning schemes. *Psychonomic Science*, 1971a, *22*, 338-339.

Roberge, J.J. and Antonak, R.F. Effects of familiarity with content on propositional reasoning. *Journal of General Psychology*, 1979, *100*, 35-41.

Roberge, J.J. and Flexner, B. Further examination of formal operational reasoning abilities. *Child Development*, 1979, *50*, 478-484.

Rubin, K. Extinction of conservation: A life span investigation *Developmental Psychology*, 1976, *12*, (1), 51-56.

Schwebel, M. Formal operations in first year college students. *Journal of Psychology*, 1975, *91*, 133-141.

Storck, P., Looft, W., and Hooper, F. H. Interrelationships among Piagetian tasks and traditional measures of cognitive abilities in mature and aged adults. *Journal of Gerontology*, 1972, *4*, 461-465.

Tomlinson-Keasey, C. Formal operations in females from eleven to fifty-four years of age. *Developmental Psychology*, 1972, *6*, 364.

Trowler, J. O. and Wheatley, G. conservation concepts in college students. *Journal of Genetic Psychology*, 1971, *118*, 265-270.

Van Duyne, P. C. Realism and linguistic complexity in reasoing. *British Journal of Psychology*, 1974, *65*, 59-67.

Wason, P. C. and Johnson-Laird, P.N. Proving a disjunctive rule, Quarterly Journal of Experimental Psychology, 1969, 21, 14-20.

Wason, P. C., and Johnson-Laird, P.N. A conflict between selecting and evaluating information in an inferential task. British Journal of Psychology, 1970, 61, 509-515.

Wason, P. C., and Shapiro, D. Natural and contrived experience in reasoning problems. Quarterly Journal of Experimental Psychology, 1971, 23, 63-71.

BEYOND 1984: PROJECTING PARTICIPATION IN ADULT EDUCATION

DAVICE G. CHIMENE
SYRACUSE UNIVERSITY

INTRODUCTION:

The demographic shift of the United States population from younger to older presents both problems and opportunities. Alternative markets are being sought to fill empty physical plants and provide work for faculty. Before we, as adult educators, promise to provide the panacea for these difficulties, we should have a sense of what we can promise realistically.

There is no window into the future guaranteed to be clear. At best we are making an educated guess. There is no point in making the process even more obscure than it need be. To that end, it is important to be aware of at least some of the assumptions underlying any prediction, projection, forecast, etc.

One basic assumption is that "the status will remain quo", i.e., that no major external or internal factors will change the current patterns of participation in adult education. There will be no world cataclysm, the economy will not fluctuate substantially more than usual, and government policies will not massively support nor severely penalize participants in adult education.

A second set of assumptions relates to the validity of whatever methodology is used in the process of projection. There are a variety of choices: extension of straight lines, exponential smoothing, Bayesian statistics, etc. The bibliography gives a sampling of pertinent books that discuss and, in some cases, apply different methods. Some techniques cannot be applied to a given data set because they are incompatable. Other methods produce results that, upon examination, are not intuitively acceptable. If the data indicate a steady increase but the projections show a sharp decline, something is wrong.

The final choice may be made among several methods that seemingly produce equally valid results. If the data extend sufficiently back in time, the method might be applied to see if it can come close to predicting actual data. The presumption would then be that it could predict into the future as well. It is always important to examine the source of the data, especially in this instance.

As one set of data is gathered, using the best design possible, it seems inevitable that valid criticisms will arise. The researcher usually obeys the natural impulse: correct where possible to reflect a "truer" image of reality the next time the data are gathered. The net effect of these apparently minor adjustments may be to make the data incomparable (not in the sense of "the best", unfortunately, but meaning it cannot be compared to itself). This is discussed below with reference to the specific data set used for this study.

Assistant Director, Independent Study Degree Programs, University College, 610 East Fayette St., Syracuse, N.Y. 13202 (315) 423-3269

This precarious choice of methodology is compounded by the presence of uncorrectable problems with data. The further out in time the projection, the less reliable it becomes. To refuse, on this basis, to examine the possibilities for the future would appear to be as foolhardy as blindly relying on projections. A cautious and well-tempered consideration may well save us from unpleasant surprises, allowing us to proact rather than react.

METHODOLOGY:

One source for a broad base from which to draw data is the National Center on Education Statistics (NCES) series of triennial surveys on participation in adult education. Begun in 1969 and extending through 1981, the five surveys gathered responses from thousands of people. The last three surveys show a rate of participation as compared to all adults over the age of 17 of around 12 percent. This study projected total adult population, total participants in adult education, and adults and participants by selected variables.

In an attempt to obtain the "best" projection of total adult population, the United States Census Bureau estimates were used. The Bureau's methodology for determining estimates is quite sophisticated and can be found in their publications. While NCES defines "adults" as those persons over the age of 17, the Census Bureau starts adulthood at age 18. In this study, the figure used as projected total adult population for a given date was obtained by adding the Census figure for persons of 0 and 1 17 years earlier to the Census estimate of total adults 18 and over. Since the furthest projection in this study is to 1996, appropriate data were available.

Average rate of change was the basis of the methodology used to predict the percentage of participants. The difference between the percent of total partipants, for example, was determined for 1975-78 and 1978-81. The two figures were combined, then divided by two. The result was added (or subtracted, where indicated) to the percent of participants for one date to determine the percent of participants three years later.

This method is assumes a straight line projection: The line drawn between percent of participants in 1975, 1978 and 1981 is extended to reflect the slope, be it positive, negative or level. Because of changes in the data base, and because of the apparent levelling out of participation rates beginning in 1975, the 1969 and 1972 surveys were not used to calculate the projections. Data from these surveys are included in the tables that accompany the complete study for information.

Once the percentages were calculated, projected numbers of adults and participants were determined by multiplying the total adult population estimate by those percentages and dividing by 100. The percentages of participants according to a given variable as compared to adults within that same set and as compared to all participants were obtained by dividing the first figure by the second and multiplying by 100. In all cases, percentages were rounded off to two decimal places.

The NCES definition of adult education excludes full time study leading to a degree. In the earliest surveys, NCES operated under two assumptions: no one going to school full time would also participate in adult education, and no one over the age of 35 would be going to school full time. In later surveys, these distinctions were not made.

Other changes occurred in the data base. Vocational education students were broken out in 1975 and 1978 but apparently returned to the fold in 1981. "Hispanic" was distinguished for the first time in 1981. In both these cases, NCES supplied information that made it possible to reconstruct the "old" method and have comparable figures.

However, NCES changed the questions relating to "income" in 1981 beyond the point of repair. The data and a fuller discussion of them are included in the complete report of this study as a cautionary tale.

Suffice it to say that each time new data are made available, albeit from the same source and bearing the same description, the researcher is well advised to read the boring bits at the back of the book that detail the methodology used. With luck, there will be compatability between new and old data sets and comparisons, perhaps even projections, can be made. The researcher should be fully prepared for the worst case, though: abandoning a heretofore promising line of inquiry that has reached a dead end.

FINDINGS:

The full report of the study contains tables for each of the variables examined: highest level of education completed, age, race, sex, annual family income and employment status. Neither the tables nor the detailed discussion of each that followed can be included here because of space restrictions.* A condensed version of the tables can be found on page 5 of this report. It omits the various percentages.

CONCLUSIONS AND IMPLICATIONS:

While the total adult population will increase by 9 percent between 1984 and 1996, participants in adult education will have added some 30 percent to their numbers in that same time period. An additional 8.5 million will be participating when compared to 1981 figures. This is not time for adult educators to be complacent, however. Various projections will be discussed below to justify this concern.

The trend for participants with less than four years of high school is an increase of .02 percent every trienniam when compared to the total adult population. Even this slight rise is enough to increase the number of participants by slightly less than 100,000 every three years. Examination of the data show that this segment of the population is far from stable in its participation patterns. The comparisons of these participants with all adults with less than four years of high school, total participants and total adult population show a rise in the percentages between 1975 and 1978 and a decline between 1978 and 1981. The decline in the percentage used to calculate the projections is slightly less than the increase, so there is an upward trend. But it could just as easily have been the reverse, with a decline of some 500,000 participants rather than an increase by 1996. Those of us who work with this population must be conscious that this is a precarious projection at best.

Participants with four years of high school and more are increasing, with the greatest growth among those with one to three years of college. These people are probably either paying for their education out of their own pockets or relying on their employers for support. As the economy tightens, employers are less apt to pay for education that is not clearly job-related. They are also increasingly reluctant to give employees release time for educational activities, job-related or not. We should initiate and support efforts to convince employers of the importance of education, to provide tax breaks for adults paying for their own education, to increase the availability of education loans, etc.

---

* A copy of the complete study may be obtained from the author.

Participants at all age levels are increasing in numbers, with the fastest rise in the 55+ cohort. At their best, the over 55 participants remain the smallest percentage of total participants and of total population. Efforts to develop programs to serve this group, as well as to convince more older adults that "it's OK to learn," should be of prime importance. If older adults continue to develop their skills at lobbying, they may well persuade policy makers to address their educational needs with funding as well as promises. Educators should be prepared to serve them.

The projections by race cry out for attention. While 11.83 percent of all adults in 1996 are black, less than one percent of all adults are shown as black and participating in adult education. We must be doing something wrong and it is time we began to take corrective actions.

There are more adult women than men in our population, and they participate in adult education in an even higher proportion. Those of us who are feminists may be pleased. But we should be careful we are not perpetuating sexist stereotypes. Are our "how-to" computer courses addressing the mathophobic, machineophobic woman? Are we assuming a woman will use a personal computer to keep track of recipes and maybe balance her checkbook, while a man will need to know how to perform real work on it?

No projections were made for income because of problems with the data base, discussed fully in the complete report. However, it can be noted that NCES shows almost 30 percent of the population as having an annual family income greater than $25,000 in 1981. This is probably due to a combination of both spouses working as well as the inflation rate. Though they may have more money to spend, they may have less time. The percentage of people at that income level who participate in adult education shows a decline.

The "working" category in the employment status data shows an increase both in total population and participants. But the former is rising faster than the latter. Is that another manifistation of the phenomenon noted in the preceding paragraph?

There is a decline in adults keeping house, presumably reflecting the increase in the number of women working. However, we're reaching a declining percentage of those still at home, thus reducing the total number of participants in this category quickly.

The population "seeking work" should prove a fertile field for our efforts. Retraining is being widely used as a way to address the high rate of unemployment in industries with poor prognoses for growth. Public as well as private support for this kind of education seems forthcoming.

In conclusion, data can be found, projections can be made, and problems identified. The process can be repeated on institutional, metropolitan, state, regional international - virtually any data base imaginable and obtainable. That is why the methodology chosen for this research was "simple" and easily applied by anyone with basic math skills. The purpose is to stimulate thoughtful planning, a process that cannot help but strengthen adult education in general and adult educators in particular.

ENROLLMENT IN THOUSANDS	ACTUAL				PROJECTED			
	1975	1978	1981	1984	1987	1990	1993	1996
Total population	146602	154496	165830	172490	177265	181991	195245	188723
Total participants	17059	19338	21252	23123	24809	26554	28112	29753
HIGHEST LEVEL OF ED. COMPLETED								
Less than 4 years High School								
All adults	53588	52091	51043	48108	44317	41239	35605	30819
Participants	1756	2029	2059	2173	2269	2366	2445	2529
4 years High School								
All adults	53755	56847	63208	67006	70155	73354	76017	78924
Participants	6396	6641	6998	7158	7232	7298	7299	7304
1-3 years College								
All adults	21001	24046	27052	29846	32427	35093	37555	40128
Participants	3687	4622	5307	6124	6914	7735	8522	9342
4+ years College								
All adults	18457	21512	24526	27408	30117	32922	35548	38292
Participants	5220	6046	6889	7683	8428	9198	9918	10671
AGE								
17-34 years								
All adults	60038	64611	70787	75131	78753	82436	85521	88769
Participants	9604	11069	11450	12506	13472	14468	15375	16325
35-54 years								
All adults	45871	46787	48568	48794	48376	47845	46848	45841
Participants	5829	6290	7333	8007	8619	9249	9822	10421
55 years and over								
All adults	40693	43098	46475	48593	50176	51769	52954	54212
Participants	1627	1976	2470	2897	3314	3748	4167	4604
RACE								
White								
All adults	129592	135874	144631	149428	152519	155511	157199	159037
Participants	15739	17855	19443	20802	21981	23186	24230	25327
Black								
All adults	14856	16015	17387	18551	19543	20556	21423	22335
Participants	1031	1127	1299	1320	1530	1644	1747	1856
Other								
All adults	2153	2607	3812	4690	5564	6477	7370	8301
Participants	289	354	510	634	758	887	1014	1147
SEX								
Male								
All adults	68810	72930	78293	81679	84188	86687	88497	90422
Participants	8027	8384	9359	9873	10288	10708	11048	11406
Female								
All adults	77792	81565	87538	90812	93078	95305	96749	98302
Participants	9032	10952	11893	13250	14521	15836	17064	18347
EMPLOYMENT STATUS								
Working or with job but not working								
All adults	83009	92537	99862	106977	113130	119422	124891	130633
Participants	12782	14832	16798	18697	20473	22311	24026	25817
Seeking work								
All adults	7505	5316	7531	7222	7022	6682	6264	5834
Participants	810	626	842	841	829	815	792	770
Keeping house								
All adults	35042	33529	31923	29186	25864	22313	18396	14344
Participants	2705	2773	2397	2148	1853	1539	1196	841
Going to school								
All adults	6209	6573	6633	6692	6665	6624	6520	6416
Participants	278	588	517	638	762	891	1018	1151
Other								
All adults	14838	16540	19880	22300	24583	25239	25690	26172
Participants	483	516	698	810	922	1037	1149	1264

BIBLIOGRAPHY

Charmer, Ivan. *Patterns of Adult Participation in Learning Activities*. Washington, D.C.: National Institute for Work and Learning, 1980.

Hack, Walter G. *Educational Futurism 1985: Challenges for Schools and their Administrators*. Berkeley, California: McCutchan Publishing Corporation, 1971.

Harrington, Fred Harvey. *The Future of Adult Education*. San Francisco: Jossey-Bass Publishers, 1979.

Hencley, Stephen P. and Yates, James R. *Futurism in Education: Methodologies*. Berkeley, California: McCutchan Publishing Corporation, 1974.

Hirsch, Werner Z and Colleagues. *Inventing Education for the Future*. San Francisco: Chandler Publishing Company, 1967.

Kidder, David E. *Review and Synthesis of Research on Manpower Forecasting for Vocational-Technical Education*. Columbus, Ohio: ERIC Clearinghouse of Vocational and Technical Education, 1979.

Momeni, Jamshid. *Adult Participation in Education: Past Trends and Some Projections for the 1980s*. Washington, D.C.: National Institute for Work and Learning, 1980.

Mood, Alexander M. *The Future of Higher Education: Some Speculations and Suggestions*. New York: McGraw-Hill Publishing Company, 1967.

National Center for Education Statistics. _____. Washington, D.C.: U.S. Government Printing Office, ____.

Participation in Adult Education Final Report, 1969. 1974.

Participation in Adult Education Final Report, 1971. 1976.

Participation in Adult Education Final Report, 1975. 1978.

"*Participation in Adult Education Final Report, 1978*." Unpublished.

Participation in Adult Education 1981. 1982.

Smith, Douglas H. and Weingand, Darlene E. "Forecasting Techniques for Adult and Continuing Education." Paper presented to the National Adult Education Conference, Anaheim, California, October 1981, unpublished.

U.S. Department of Commerce, Bureau of the Census. _____. Washington, D.C.: U.S. Government Printing Office, _____.

Estimates of the Population of the United States by Age, Race and Sex, 1974-1980. 1980.

Current Population Reports, Population Estimates and Projections. *Projections of the Population of the United States: 1977 to 2050*. 1977.

THE EDUCATIONAL ORIENTATION SCALE

WM. MICHAEL CLEMMER
THE UNIVERSITY OF MICHIGAN

The effort to develop specific educational programming aimed at older adults has been severely handicapped by a dearth of information about the educational orientations of this newly recognized clientele. The research into the educational orientations of adults is heavily reliant upon variations of Roger Boshier's Education Participation Scale and attempts to follow Boshier's factor-analytic technique. Boshier-Riddell's Education Participation Scale (Short Form) is one of the few efforts to develop an instrument appropriate for the investigation of the educational orientations of older adults. The Education Participation Scale (Short Form) was constructed by deleting work-life related items from the full Education Participation Scale. In this study, the Educational Orientation Scale was developed specifically to address the unique circumstances of older adults. The statistical treatment of the Educational Orientation Scale explored cluster analysis technique as an alternative to the complex and often troublesome factor analytic technique.

METHOD

SETTING OF THE STUDY

During the late summer of 1976, the Monroe Senior Citizen's Adult Education Program (Monroe, Michigan) was instituted in order to provide day-time adult high school completion classes, as well as enrichment classes, that are specifically geared to address the needs of persons aged 55 years and older. During this study the Monroe Program offered 29 different courses in five school districts. The courses were held in seven (7) senior citizen's centers, two (2) senior citizens' high rise apartments, and seven (7) nursing homes. There were 350 nursing home students and 400 non-nursing home students served by the program. The subjects for this study were the non-nursing home students.

AN OVERVIEW OF METHOD

The study was carried out in three epigenetic phases, each of which corresponded to a stage in the ongoing self-evaluation of the Monroe Senior Citizen's Adult Education Program. Phase I involved the development and testing of the Education Orientation Scale (E.O.S.). The instrument was created by taking Boshier's Education Participation Scale items and altering them so that they specifically address the retirement circumstances of older adults. The face validity of the instrument was tested by correlating students' scores on the E.O.S. with a measure of their intent to enroll in courses that corresponded with their intentions. The latter measure was developed by having the Director of the Monroe Program, based upon his knowledge of the class objectives and instructional methods, place courses into one of three Course Orientation Categories (academic, practical, or enrichment). Subjects indicated their Participation Intention Level (definitely planning to enroll, thinking about enrolling, or not considering enrollment) for all courses. The Director's classification of courses and student's Participation Intention Levels were combined into a measure of their interest in/inclination toward the courses.

---

*Address: 146 Wittman Drive, Petersburg, Michigan 49270

In Phase II, the Educational Orientation Scale was refined, based upon the results of Phase I and on data from tests of Boshier-Riddell's Education Participation Scale (Short Form). The predictive validity of the revised Educational Orientation Scale was tested by performing the Goodman-Kruskal measures of predictive association for students' E.O.S. scores and "Student Involvement Levels." The Student Involvement Levels in Phase II were similar to the "Participation Intention Levels" in Phase I except that another level of student involvement, that of "currently enrolled," was added as a response category. In Phase II, the students and an independent group of adult educators, as well as the Program Director, were asked to assign one of three Course Orientation Categories (academic, practical, or enrichment) to each of the Monroe Program's courses. The choices of categories were compared to determine the extent to which the three types of raters (students, the adult educators, and the Program Director) agreed in their assignment of categories.

In Phase III, both the Educational Orientation Scale and the Education Participation Scale were administered to students in the Monroe Program. As a test of the validity of the Educational Orientation Scale, correlations among educational orientations, measured by both scales, were computed. Cluster analyses of responses to both scales were also performed to explore groupings of the responses.

RESULTS

Phase I included an effort to perform a census of the some 400 students in the Monroe Program. Three hundred four (304) forms were returned; four forms could not be included in any facet of the analysis because of insufficient data. Most of the respondents were women who did not have a high school diploma. The respondents were almost equally likely to be married or widowed. The age range of the respondents was 53 to 92 years of age. The mean age group was 68 to 72 years of age. The mean grade of formal education completed was the 9th grade. Typically, the older the respondent, the more likely he/she had the less of formal education. As a preliminary stage in the study, Phase I served as a "test of concept" or pre-test. Compared with the other stages of the study, Phase I was limited in scope: it will be sufficient to observe that the results of Phase I were encouraging enough to proceed with the other stages of the study.

In Phase II, the refined Educational Orientation Scale was distributed to the non-nursing home students in the Monroe Senior Citizens' Adult Education Program. Two hundred sixty-nine (269) instruments were returned. The demographic data did not vary significantly. The data in Phase II were used to create indices for the following variables: Educational Orientation, and Student Involvement Levels. As an initial test of the predictive validity of the Educational Orientation Scale, a correlation matrix (using the Standard Pearson product-moment) was constructed for the Educational Orientation Index and the Student Involvement Level Index (see Table 1). Each of the three (3) relationships tested was statistically significant at the .01 level.

Table 1
Correlation Matrix for Educational and
Course Orientation Categories
(N = 191)

Educational Orientations	Course Orientation Categories		
	Average Student Involvement Level in Academic Classes	Average Student Involvement Level in Practical Classes	Average Student Involvement Level in Enrichment Classes
Academic/Cognitive Educational Orientation Index Scores	.3172	.2201	.1335
Practica/ Instrumental Educational Orientation Index Scores	.3129	.3188	.3667
Expressive/Social Educational Orientation Index Scores	.1996	.2629	.3622

.01 Level of Significance = .1860

Course Orientation Categories are based on data from the Monroe Program Director.

The data were then organized into bi-variate contingency tables as a prelude to a more extensive statistical analysis. The Goodman-Kruskal LAMBDA and the Goodman-Kruskal TAU were used, in conjunction with the contingency tables, as tests of predictive association. The Goodman-Kruskal GAMMA and the Kendall's TAU-B were employed as measures of rank order correlation among the variables which were tested. In the continuing analysis, extensive tables describing predictive association and rank order correlation were generated. This analysis indicated that, with rare exception, in the predictive relationship between education orientations and involvement levels in specific educational activities, specific educational activities were better predictors of educational orientation than vice-versa. However, as Educational Orientation Index Scores increased, general educational involvement and participation in corresponding groups of courses also increased. Educational Orientation Index Scores performed better as predictor of a category of educational activities than as a predictor of specific educational activities.

Phase III of the study was an effort to test the E.O.S. using Boshier-Riddell's E.P.S. (Short Form) as the criterion for validity. Phase III also attempted to identify statistical patterns in student responses to both instruments. A stratified random sample of 77 non-nursing home students was drawn from the Monroe Program. The demographic profile of the participants in Phase III closely paralleled the profile which emerged in the earlier stages of the study. Each respondent completed both the E.O.S. and the E.P.S. (Short Form). The Standard Pearson product-moment was used to test for correlations among Educational Orientation Index Scores and Education Participation Index Scores. Table 2 contains the correlation matrix constructed in this analysis. Based upon the strong correlations between the E.O. S. and the E.P.S. (Short Form), it can be concluded that the E.O.S. is a valid instrument for measuring the educational orientations of older adults.

Table 2
Standard Pearson Product-Moment Correlation Matrix
for the Educational Orientation Scale and the
Education Participation Scale
(N = 72)

	Educational Orientation Scale Indices		
Education Participation Scale Factors	Academic-Cognitive Orientation Index	Practical-Instrumental Orientation Index	Expressive-Social Orientation Index
Cognitive Interest	.6657	.4466	.3294
Social Welfare	.5155	.7740	.3625
Social Contact	.2630	.4257	.6447
Escape-Stimulation	.3233	.5776	.5348
Social-Contact and Escape-Stimulation (Collapsed Factor)	.3325	.5798	.5929

.01 Level of Significance = .3017

As an alternative to factor analysis, a cluster analysis, using the complete linkage (furthest neighbor) technique, was performed on both the E.O.S. and the E.P.S. (Short Form). In contrast to factor analysis, which attempts to identify what variables account for the most variance in data (i.e., factor analysis is a data reduction technique), cluster analysis groups similar data into increasingly larger groups. This clustering, particularly of variables, is based upon the closeness of their correlation (i.e., the most similar pair is that which is closest together in any graphic representation). Clusters become more discrete as the distance between them increases.

The E.P.S. (Short Form) displayed three major families of clusters; each major family contained two important sub-groups. Major Family 1 grouped items with a cognitive emphasis; Sub-group "A" contained items reflective of a self-motivated cognitive interest, and Sub-group "B" contained items reflective of a more or less compelled cognitive interest (e.g., "someone told me to" or "I had to in order to cope"). Major Family 2 grouped items dealing with personal relationships; Sub-group "A" contained items dealing with personal interaction, and Sub-group "B" contained items which focused on escapism. Major Family 3 grouped items which focused on broad social relationships and social concerns; Sub-group "A" clustered items dealing with human service, and Sub-group "B" contained items dealing primarily with questions of social position (i.e., status).

The E.O.S. displayed two major families of clusters, each with two major sub-groups. Major Family 1 grouped items reflective of a predominately "Expressive" educational orientation; Sub-group "A" contained items related to personal relationships and information gathering, and Sub-group "B" clustered items related to travel and arts and crafts activities. Major Family 2 grouped items related to primarily an introspectively focused and cognitively active educational orientation; Sub-group "A" contained items reflective of a cognitive, information gathering emphasis, and Sub-group "B" contained items dealing with mental and physical health through exercise. This last sub-group was the only cluster which could be said to be unique to older adults.

DISCUSSION

The analysis of the data in Phase II made it reasonably clear that, at least in the Monroe Program, only a minority of older adult students have a single, dominant educational orientation. Numerous students had strong multiple educational orientations. It would appear that, conceptually, educational orientation is not an "either...or..." proposition; rather it seems to be a "both...and..." situation. It is also a possibility that the items proposed by the E.O.S. and the E.P.S. do not accurately describe the domain of educational orientation. The strength of the statistical relationships discovered among the three educational orientations, as indexed by the E.O.S., was such as to suggest that, if a student displayed at least one educational orientation, he/she was very likely to have a second educational orientation of equal or greater strength (see Table 3).

Table 3
Correlation Matrix of Educational Orientation Scores
(N = 246)

	Academic/Cognitive Orientation	Practical/ Instrumental Orientation
Practical/Instrumental Orientation	.6601	1.000
Expressive/Social Orientation	.5190	.5610

.01 Level of Significance = .1640

The co-existence and apparent lack of exclusivity of educational orientations in older adults may account for the relative weakness of educational orientations as predictors of specific educational activities. Although Educational Orientation Index Scores were consistently better predictors of Student Involvement Levels in categories of classes (instead of vice-versa), the value of educational orientation as a predictor was diminished by its inability to discriminate among activities. Within the context of this study, educational orientation served only to identify highly motivated learners, but not the direction of their learning.

The effort to validate the E.O.S. by comparison with the E.P.S. (Short Form) more closely approximated a "part-whole correlation" than an effort to correlate two totally different instruments. Considering the strength of the correlations between categories of the E.O.S. and those of the E.P.S. (Short Form), it seems safe to assert that the E.O.S. can be of valid and significant use in research dealing with the educational orientations of older adults.

The cluster analysis of the E.O.S. defined two major families; Major Family 1 contained items which, together, could be described as a "relationally intensive" approach to information; and Major Family 2 contained items which, together, could be described as an "information intensive" approach to education. It is common knowledge that many persons find it easier in life to relate primarily to people, while an equally large number of people find it easier in life to relate primarily to things.

In light of Boshier's previous research, using the E.P.S. with various ages of adults, the cluster grouping which dealt with mental and physical health emerged as a new, perhaps characteristic, response pattern of older adults.

REFERENCES

Boshier, Roger. "Factor Analysis at Large: A Critical Review of the Motivational Orientation Literature," Adult Education 27 (1977): 24-47.

________. "Motivational Orientations of Adult Education Participants: A Factor Analytic Exploration of Houle's Typology," Adult Education 21 (1, 1975): 3-26.

________. "Motivational Orientations Revisited: Life-Space Motives and the Education Participation Scale," Adult Education 27 (2, 1977): 89-115.

Boshier, Roger, and Riddell, Gail. "Educational Participation Scale Factor Structure for Older Adults," Adult Education 3 (1978): 165-175.

Clifford, H.T., and Stephenson, W. An Introduction to Numerical Classification. New York: Academic Press, 1975.

Cole, A.J. Numerical Taxonomy. New York: Academic Press, 1969.

Conover, W.J. Practical Non-Parametric Statistics. New York: John Wiley & Sons, Inc., 1971.

Harman, Harry H. Modern Factor Analysis. Chicago: The University of Chicago Press, 1976.

PRINCIPLES OF ADULT LEARNING SCALE:
FOLLOW-UP AND FACTOR ANALYSIS

Gary J. Conti
Texas A&M University

The Problem

A large portion of the adult education literature endorses the collaborative teaching-learning mode as an appropriate method for assisting adults in the learning process. In 1978, the Principles of Adult Learning Scale (PALS) was developed to measure the degree of practitioner support of these principles. Although the original study with a field test group of 57 produced a valid and reliable instrument, the stability of the normative statistics for the instrument and the generalizability of the instrument to the multiple audiences within the adult education enterprise remained unestablished. These depended upon the use of PALS in a variety of settings and on the follow-up analysis of this larger pool of data. Such an analysis could also provide additional checks on the construct validity of the instrument.

Review of Related Literature

Although there are various modes of instruction, a significantly large portion of the adult education literature generally supports the collaborative mode as effective and appropriate for teaching adults. The writings of Lindeman, Bergevin, Kidd, Houle, Knowles, and Freire exhibit much commonality in the basic assumptions of adult learning. Collectively they argue that the curriculum should be learner centered, that learning episodes should capitalize on the learner's experience, that adults are self-directed, that the learner should participate in needs diagnosis, goals formation, and outcomes evaluation, that adults are problem-centered, and that the teacher should serve as a facilitator rather than a repository of facts.

In the collaborative mode, adult education is learner centered and a cooperative venture in which the learner is a full partner (Bergevin, 1967, p. 168). In this process, the learner is put first and education seeks to solve the peculiar problems of the participants. This approach emphasized that people, not subjects, are taught and that subjects are merely the vehicles and examples for learning (Bergevin, 1967, p. 92). Since, "the approach to adult education will be via the route of situations, not subjects" (Lindeman, 1926/1961, p. 6), in the collaborative mode the curriculum is built around the student's needs and interests with the central purpose of assisting the learner in "being" and "becoming" (Kidd, 1976, p. 125).

In this mode, the role of experience is emphasized. Adult education assists adults in becoming aware of their significant experiences and in relating these to other events in their lives (Lindeman, 1926/1961, p. 109). For adults, their experiences serve as a ever growing reservoir that can serve as a learning resource (Knowles, 1973, p. 39) and are a key in stimulating their engagement in learning (Kidd, 1976, p. 271).

For additional information contact 615 Harrington Center, Texas A&M University, College Station, Texas, 77843 (phone 713-845-5488).

One assumption of the collaborative mode is that adults are moving in the direction of increased self-direction (Knowles, 1970, p. 39) and that they have the inherent ability to control their own lives (Freire, 1970). This development is fostered by adults taking responsibility for their own learning (Kidd, 1976).

In the collaborative mode, adults become involved in their education by appraising needs, goals and outcomes. This involvement leads to learner responsibility and autonomy, increases the relevancy of the learning activities, and assures that the learners goals are fully achieved (Houle, 1972; Kidd, 1976; Knowles, 1970).

The collaborative mode assumptions recognize that adults are problem-centered. Adults have a greater interest in learning when they are dealing with problems which directly concern them (Bergevin, 1967, p. 148) and which have immediate application (Knowles, 1970, p. 39). Importantly, they have within themselves the capacity to solve their own problems (Freire, 1970).

In the collaborative mode, the role of the teacher is to function as a facilitator. The teacher's task is to create a supportive environment in which the learner is free to take risks (Kidd, 1976; Knowles, 1970) and "to draw out, not pour in" (Lindeman, 1926/1961, p. 119; Freire, 1970). When the teacher functions in this manner, education becomes a cooperative art (Houle, 1972, p. 34).

Thus, a significant portion of the adult education literature supports the assumptions of the collaborative teaching-learning mode. Although various authors stress different elements composing this mode, they all profess a learner-centered approach in adult education in which the key word is always participation (Lindeman, 1926/1961, p. xvi).

Principles of Adult Learning Scale

The Principles of Adult Learning Scale (PALS) was developed to measure practitioner support of the collaborative mode as described in the adult education literature. The items were formulated from concepts specifically stated in the adult education literature. The construct validity for the items of the instrument was established through the testimony of juries of adult educators. The content validity was established by field tests with adult basic education practitioners in full-time public school programs in Illinois. The first phase of the field-testing consisted of activities to improve the discriminating power of potential items. The second phase involved the testing of a similar form of the instrument with 57 practitioners in a variety of adult basic education settings. Criterion-related validity was established by the actual classroom observation of those who had scored two standard deviations either above or below the mean. These observations were rated according to the Flanders Interaction Analysis Categories (FIAC), and these scores were compared to PALS. The FIAC was selected because it measures initiating and responsive classroom actions and because the actions described in Flander's definition of initiating are highly congruent with the characteristics of the collaborative mode. Reliability was established by retesting a group of 23 adult basic education practitioners after a seven day interval. In addition to these traditional checks of validity and reliability, social desirability and congruency of item interpretation by practitioners were also investigated.

As a result of this procedure, a reliable and valid 44 item summated rating scale, which is rooted in the adult education literature, was produced. The instrument can be completed in less than 15 minutes and scored quickly. This study suggested a mean of 146 and standard deviation of 22 for the instrument. Conti (1978, 1979) has described in detail the development of the instrument, made suggestions for its use in empirical studies and with practitioners, recorded the final form of the instrument, and reported on procedures for scoring.

Follow-Up Uses of PALS

Since its development, PALS has been used in numerous adult educator training workshops and in three doctoral studies. Individual scores from these uses have provided a diverse data set for re-examining the normative statistics for the instrument and for formulating insights related to its future use.

The analysis of 778 cases indicates that the descriptive statistics for PALS are stable. These cases were drawn from a variety of institutional settings in different areas of the United States. In a staff development needs study, Dinges (1980) tested 265 adult basic education teachers throughout Illinois with the instrument. Investigating the relationship between managerial style and support of the principles in the adult education literature, Pearson (1980) administered PALS to 99 midwestern training directors. Douglas (1982) used PALS as the measurement device in a study examining the relationship of professional training in adult education to the degree of support of the collaborative mode by 204 hospital educators and cooperative extension educators in Washington. In addition, 153 scores were collected from Texas adult education practitioners in the areas of adult basic and allied health education. Although these groups represent a much broader sampling of the adult education community than the pilot group, the descriptive statistics for each as shown in Table 1 are similar to those produced in the original study. The similarity between the mean and standard deviation scores for the total of all groups and the original pilot group indicates that 146 is an accurate mean for PALS. This additional data suggests that the standard deviation should be 20.

Table 1

Mean and Standard Deviation
of Various Adult Education Groups on PALS

Group	Size	Mean	Standard Deviation
Original Sample	57	145.60	22.14
Hospital Educators	97	149.25	17.90
Training Directors	99	148.76	22.30
Cooperative Extension	107	146.30	18.46
Texas Adult Educators	153	144.02	21.26
Illinois ABE Teachers	265	145.14	19.96
Total	778	146.09	20.28

This expanded data set lends additional support for the generalizability of PALS. Although PALS was originally designed for use with adult basic education practitioners, an analysis of variance as shown in Table 2 indicates that no significant difference exists among the various groups tested (p=.28). Therefore, even though the wording of some items may not be specifically appealing to some areas of the field, PALS can be used by adult educators in a wide variety of settings to measure support of the collaborative mode.

Table 2

Analysis of Variance Between
Various Group Sampled with PALS

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	5	2,586	517	1.26	.28
Within Groups	772	316,838	410		
Total	777	319,424			

Factor Analysis of PALS

The large number of cases which were collected made it possible to conduct a factor analysis on PALS and thereby to statistically check the construct validity of the instrument. "Factor Analysis is based on the fundamental assumption that some underlying factors, which are smaller in number than the number of observed variables, are responsible for the covariation among the observed variables" (Kim & Mueller, 1978, p. 12). If PALS correctly measures the collaborative theory in the literature, then this data reduction technique should produce identifiable factors which are similar to the major concepts discussed in the literature.

When conducting a factor analysis, it is desirable to have a 10 to 1 ratio of cases to variables. This was exceeded by using 509 cases for this 44 item instrument. Although researchers often delete items below a .4 loading from a factor, Kim and Mueller (1978) warn that"the deletion of variables in order to have a neat factorial structure can lead into an erroneous conclusion" (p. 68). In addition, since "a good factor analysis requires the researcher to know a great deal about the factorial structure of variables" (p. 68), each item was assigned to the factor in which it had the highest loading. In this way, every item in the instrument was retained for factor analysis.

The SPSS Factor Analysis program utilizing principal factoring with iteration and varimax rotation was used. This procedure produced seven discernable factors. In these factors, 31 items loaded above .40; three were between .35 and .40; seven were between .30 and .35; and only three were below .30.

Factor 1 contained 12 negative items. These items focused on evaluation by formal tests, on comparing the learners to outside standards such as standarized tests and middle-class values, and on control of the learner by means of quiet deskwork, disciplinary action, and teacher determination of objectives. These items are antithetical to the collaborative concept of Learner Centered Activities.

The nine items in Factor 2 related to Personalizing Instruction. They dealt with the self-pacing of learning, utilizing a variety of materials, methods, and assignments, and objectives which are based on individual motives and abilities.

Factor 3 was made up of six items and was entitled Relating to Experience. Items in this factor focused on problem solving, utilizing prior experience, and relating learning activities to everyday life.

The four items in Factor 4 stressed the importance of Assessing Student Needs. Items related to individual conferences, informal counseling, and learner involvement in diagnosis composed this factor.

Climate Building was Factor 5. These four items stressed self-control through classroom breaks and interaction with other students. Also included were the teacher's elimination of barriers by utilizing the existing competencies of the students and by accepting errors as a natural part of learning.

Factor 6 dealt with Participation in the Learning Process. The four items in this factor dealt with learner demonstrating self-direction in selecting the learning content, evaluating performance, and identifying problems.

Finally, Factor 7 contained the remainder of the negative items. These five items were the opposite of Flexibility for Personal Development. They contained the negative traits of avoiding value issues, of maintaining classroom discipline, of entransigence in modifying original objective, and of viewing the teacher as primarily a provider of knowledge.

The factors produced by this analysis support the construct validity of PALS. These seven factors, which were statistically derived, are similar to the general principles found in a review of the adult education literature supporting the collaborative mode. This statistical analysis using a broad sampling of adult education practitioners supports the testimony of the original jury for PALS and further confirms the construct validity of the instrument.

Empirical Uses of PALS

The stable normative statistics for PALS suggests that it is a valid instrument for use in research studies. In these studies, PALS can be used to measure the degree of practitioner support of the collaborative mode which is widely supported in the literature. This measurement can be combined with a wide variety of other controls to produce research-based data to evaluate the validity of the literature base and to provide situational specificity to the general principles discussed in the literature. Variables that may be studied are student growth in the cognitive and affective domain, the relationship of teaching and learning style, and factors influencing the situational setting such as the nature of the curriculum or the institutional setting.

By combining a variety of studies in areas such as these, it will be possible to provide greater specificity to the literature. For example, Pearson (1980) found that congruency exists between management style and teaching style and, more importantly, that the amount of formal education was the major influence in accepting a collaborative approach in these areas. Douglas (1982) took this concept one step further when he found that the amount of formal training specifically in adult education was the major influence on accepting a collaborative approach in an adult education setting. Just as these two studies have explored a similar area, PALS can serve as the measurement device for other studies dealing with a variety of the variables in the adult learning transaction.

References

Bergevin, P. A philosophy for adult education. New York: The Seabury Press, 1967.

Conti, G. J. Principles of Adult Learning Scale: An instrument for measuring teacher behavior related to the collaborative teaching-learning mode. Unpublished doctoral dissertation, Northern Illinois University, 1978.

Conti, G. J. Principles of Adult Learning Scale. Ann Arbor, Mich.: Adult Education Research Conference, 1979. (ERIC Document Reproduction Service No. ED 179 713).

Dinges, R. F. The degree of utilization of the collaborative teaching-learning mode by adult basic education teachers in Illinois. Unpublished doctoral dissertation, Southern Illinois University, 1980.

Douglass, J. F. An analysis of the relationship between professional training in adult education and orientation to the collaborative teaching-learning mode in Washington state hospital and the Washington state cooperative extension service. Unpublished doctoral dissertation, Indiana University, 1982.

Freire, P. Pedagogy of the oppressed. New York: The Seabury Press, 1970.

Houle, C. O. The design of education. San Francisco: Jossey-Bass, Inc., 1972.

Kidd, J. R. How adults learn. New York: Association Press, 1976.

Kim, J. Factor analysis. In N. Nie, C. Hull, J. Jenkins, K. Steinbrenner, & D. Bent (Eds.), Statistical package for the social sciences (2nd ed.). New York: McGraw-Hill Book Company, 1975.

Kim, J., & Mueller, C. W. Introduction to factor analysis. Beverly Hills, Calf.: Sage Publications, 1978.

Knowles, M. S. The modern practice of adult education. New York: Association Press, 1970.

Lindeman, E. C. The meaning of adult education. Montreal: Harvest House, 1961. (Originally published, 1926).

Pearson, T. G. Managerial philosophy and adult learning principles: Training and development professionals as managers of collaborative learning. Unpublished doctoral dissertation, Northern Illinois University, 1980.

DETERMINANTS OF ADULT EDUCATION PARTICIPATION OF LOW INCOME ADULTS

Peter S. Cookson*

Introduction

In anticipation of a favorable response to an application for a research grant, a non-funded pilot study in a low income area of Vancouver, Canada was conducted in the fall of 1982. This study was an outgrowth of efforts by the researcher to conceptualize a comprehensive and integrative theoretical model of adult education participation (AEP) and to operationalize some of the variables included in that model. While the pilot study served most of its purposes, the disappointingly small number of respondents prevents any meaningful presentation of the data collected. Consequently, the emphasis of this paper is on delineation in broad relief of the model guiding the research which has subsequently been funded by the Social Sciences and Humanities Research Council (Canada) and which is now in progress. Limitations of space preclude detailed description of every facet of the model or of its specific points of application to low income adults. The research now underway will be briefly described following the discussion of the theoretical model.

Conceptual Framework

Borrowed and adapted by the researcher from the sociology of leisure to explain AEP, the conceptual framework presented in this paper is based on what David Horton Smith (1980) calls the "interdisciplinary, sequential specificity, time allocation, life span (ISSTAL) model." Unlike most explanations of social participation in general and AEP in particular, it incorporates social-psychological and situational variables, without regard to the established and customary disciplinary boundaries. Additionally, it provides for consideration of complex, mediated, interactive, and feedback effects in a causal system. The main dependent variable of AEP is viewed in the model as a form of individual discretionary behavior, as a consequent of the combined and interactive influence of six classes of independent antecedent variables: external context factors, social background and social role factors, personality and intellectual capacity factors, attitudinal dispositions, retained information, and situational factors (Smith, 1980).

The underlying assumption of the model is that human behavior is to some extent "predictable" or "determined" by certain identifiable and measurable aspects of both the person and environment. Contrary to the claims of some who favor phenomenological approaches, the aim of this particular social science model is not inappropriate control over people, but rather more intelligent manipulation of those aspects of the social reality which can increase the opportunities and chances for adults to engage in the process of improvement of their skill, knowledge, or sensitiveness (Houle, 1972).

Three features of the ISSTAL model, explicit in its label, are of particular relevance for the development of theory and research of AEP. These features are: (1) interdisciplinary conceptual framework; (2) sequential specificity of relations among the independent variables and between those variables and between those variables and AEP; and (3) time allocation life span perspective.

---

*Adult Education Research Centre, University of British Columbia, 5760 Toronto Road, Vancouver, B.C., CANADA V6T 1L2 (Tel. 604 228-2086)

Interdisciplinary conceptual framework. In the explication of the influence of the variables in each of the six classes on AEP, theory- and empirically-based findings are employed from a number of behavioral sciences. Thus, the interdisciplinary perspective of the ISSTAL model includes concepts and interrelationships articulated in the fields of physiology, anthropology, political science, sociology, social-psychology, psychology, as well as the discipline of adult education. Appeal to an interdisciplinary conceptual framework for the explanation of AEP runs counter to a decidedly psychological reductionist trend in much of the adult education research literature (Rubenson, 1980).

Sequential specificity of relations. Besides their function as predictors of AEP, the six independent variable classes are causally interconnected in Figure 1. All but the situational variables exert the bulk of their influence on AEP via one or more intervening variables. Thus, the further left on the continuum of "breadth of relevance" a variable is placed, the more general, transsituational its influence, and the greater probability that its influence will be mediated by subsequent and consequent variables. Conversely, the further right a variable is placed on the same continuum, the more situation/role specific its influence on AEP.

Time allocation - life span perspective. This feature parallels the primary focus of what Smith (1980) refers to as the general activity model variant of the ISSTAL model. AEP is viewed as demonstrating both synchronic and diachronic covariation. Not only does an individual's participation in adult education activities have implications for other types of social participation (see London and Wenkert, 1969), but patterns of AEP synchronically covary with other types of socially valued discretionary activities. AEP is thus conceptualized as part of an overall behavior pattern of social participation. The life span feature of the ISSTAL model postulates that social participation (including AEP) tends to fit into lifelong patterns, i.e., exhibit diachronic covariation. Accordingly, people who exhibit higher levels of AEP in their thirties may also be expected to display similarly higher levels in their forties, fifties, and sixties -- relative to others within the same cohort. Conversely, people who exhibit lower levels of AEP may be expected to be continuing a pattern set earlier in life and which will probably extend into the future.

The ISSTAL model offers a multivariate, multirealm explanation of AEP in terms of the interrelationships among six classes of independent variables and their direct and/or mediated effects on purposive individual learning. We cannot provide here a detailed explanation for each of the variables pertinent to the model. Suffice it to say that the bases for the hypothesized causal relations depicted in Figure 1 are analogs provided by previous applications of the model to other forms of individual discretionary behavior and previous efforts to study and explain AEP in the mainstream (North American) adult education literature (Cookson, 1982).

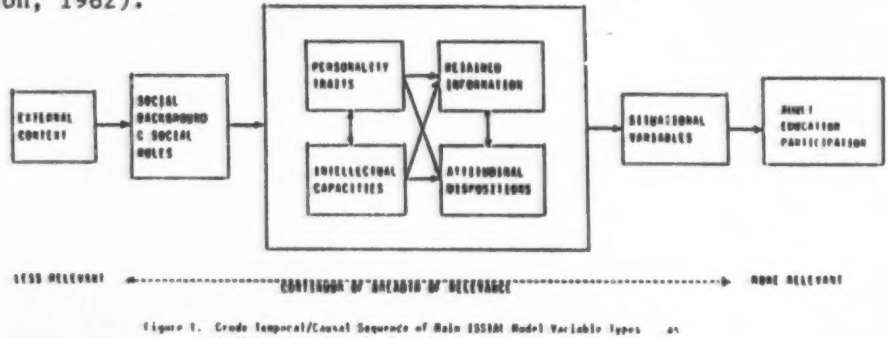


Figure 1. Crude Temporal/Causal Sequence of Main ISSTAL Model Variable Types as Applied to Adult Education Participation (adapted from Smith, 1980, p. 441)

BEST COPY AVAILABLE

A. Dependent Variable

As Houle (1965) states, ". . . Since people take part [in adult education activities] to a greater or lesser degree . . . the stark division [of adults] into participants and nonparticipants cannot be maintained." To allow for maximum variance in the dependent variable in any theoretical or empirical examination of AEP, therefore, it is essential that AEP be conceptualized in terms of the full range of learning activities -- not solely those which happen to occur under institutional auspices. Paraphrasing Houle's definition, AEP may be defined as the sum total of behaviors (activities) performed by men and women (alone, in groups, or institutional settings) while engaged in the process of seeking to improve their knowledge, skill, or sensitiveness. Although collection of data relative to "learning projects" (Tough, 1971) would produce a measure of AEP consisting of comparable units of value (total hours spent in such activities) on a ratio scale, the inordinate amount of time required to complete the intensive, in-depth questioning to obtain such information constitutes a severe methodological handicap. Far too little time would remain in the interview for collection of information relative to the six classes of independent variables posited by the ISSTAL model. Accordingly, the Leisure Activities Survey, a carefully constructed ordinal scale with acceptable levels of validity and reliability (Litchfield, 1965), wouldrepresent an appropriate measure of AEP in any empirical application of the ISSTAL model.

B. Independent Variables

Class I. External Contextual Factors

This first class of independent variables refers to the individual's external environment which, according to Smith and Reddy (1972, p. 299), forms

> . . . a matrix within which the soical background, personality, and attitudinal characteristics of individuals originate, develop, and change. Indeed, more "internal" individual characteristics have their essential set of social expectations, norms, structures, cultural patterns, human population, and biophysical environmental variables comprising the category of contextual characteristics.

The effects of these contextual characteristics on AEP are hypothesized to be mediated via the subsequent personal variables which "serve to classify an individual in any given context" (Reddy, 1980, p. 379). If the external environment is "deficient," e.g., extremes of climate or topography restrict free movement of individuals, wide spatial dispersion of population reduces social intercourse, and societal resources for public education and learning are nonexistent for adults), AEP may be expected to be adversely affected. On the other hand, if the external environment is favorable, e.g., the climatic extremes are either absent or ameliorated by heating or cooling systems, geographic isolation is reduced through communication or transportation systems, and government policies reflect a positive societal commitment to support adult education, the overall rate of AEP for a given population may be expected to be correspondingly enhanced.

External context variables have been largely ignored in the adult education literature. Although systematic differences in levels of AEP have been noted according to residence (Johnstone and Rivera, 1965; Waniewicz, 1976), systematic examination of other population factors has yet to be done. With the exception of the cross-cultural, cross-national comparison of values toward adult education made by Krajnc (1973) and some preliminary analysis of the effects of divergent national public policies on AEP (Rubenson, 1980), macrosocietal research of the effects of either the cultural or social-structural factors which affect AEP has yet to be done.

Class II. Social Background and Social Role Factors

Background and social role characteristics "provide behavioral expectations, models for role behavior, and experiences that affect the breadth and specificity of knowledge of one's world" (Reddy, 1980, p. 380). In order of increasing relevance to AEP, these characteristics may be hypothesized to stem from (1) self-perceived health condition; (2) perceived nature of early schooling (Cross, 1981); (3) unique experiential history (Kohn, 1969); (4) socioeconomic status (in terms of occupation, education, income, and access to resources); (5) position in life cycle , comprising dimensions of age, gender, number, and ages of children, relation to aging parents, marital status, homeownership, and perceived location in an occupational career; (6) current occupational status conditions, including extent of occupational self-direction, routinization, closeness of supervision, and substantive complexity of the job (Kohn, 1969; Meissner, 1971); (7) organizational membership (London, Wenkert, and Hagstrom, 1963); and (8) leisure style (London, Wenkert, and Hagstrom, 1963; Litchfield, 1965).

Although the association between some of these factors, most notably socioeconomic status and age, as a single dimension of life cycle position, has been observed numerous times in relation to AEP, little pertinent data have been generated to explain the reasons for such association. Singly and in combination, the eight variables named above are hypothesized to either facilitate or restrict psychological functioning (Kohn and Schooler, 1973); and, thereby every facet of behavior, including parental disciplinary behavior (Kohn, 1969), and participation in organized voluntary action (Payne, Payne, and Reddy, 1972). Similar associations are anticipated with respect to AEP.

Class III. Personality and Intellectual Capacity Factors

This class of variables comprises psychological characteristics which are believed to affect social behavior consistently in many situations over time (Smith, 1980). When such characteristics resemble what Smith (1980, pp. 466-472) refers to as the "active-effective character," they are expected to be associated, both directly and indirectly, via other personal variables in the ISSTAL scheme, with socioculturally preferred forms of social participation, including AEP. Personality traits and intellectual capacity (Kohn, 1969, refers to such factors as psychological functioning) are viewed in the model as significant intervening variables for the antecendent social background and social role variables. Few, if any, studies have been conducted of the association between personality and intellectual capacity factors and AEP.

Class IV. Attitudinal Dispositions

The fourth class of independent variables comprises less enduring and less transsituational internal psychological characteristics than Class III. Together with Class III and Class IV variables, with which they are in dynamic interaction, they contribute to the motivation of the individual to participate in adult education activities. The ISSTAL model suggests general value orientation, in terms of both instrumental and terminal values (Rokeach, 1973), and the specific attitude of interest in learning (Johnstone and Rivera, 1965; Waniewicz, 1976) as crucial components of a multivariate explanation of AEP.

Class V. Retained Information

From the individual's continuing, enduring, and usually growing stock of information stored in the brain as symbolic and non-symbolic images (Smith, 1980, pp. 59-61), two variables may be highlighted in connection with AEP. One variable, learning orientation, comprises beliefs about other-directed learning activities vis-à-vis self-directed learning activities. Knowledge of available adult education opportunities comprises a second variable hypothesized as exerting direct and indirect independent effects upon AEP while mediating the influence of antecedent variables.

Class VI. Situational Variables

AEP is conceptualized as a form of individual discretionary behavior most directly contingent upon the individual's immediate awareness and definition of situations specific to AEP. The concept of margin (McClusky, 1965), though never operationalized, could be categorized as a situational variable. Margin symbolizes not just capacities, resources, and inducements which comprise power nor just responsibilities and constraints which comprise load. Rather, the critical element is the ratio or the nature of the relationship between power and load as ultimately sensed by the individual. With the ISSTAL model's emphasis on individual discretionary behavior, designation of perceived discretionary energy (viewed as the relative amount of physical, mental, and emotional energy the individual discerns to be available for participation), as an operational analog of margin, would seem appropriate. Evaluation of participation utility, a summative assessment of the individual's overall AEP pattern, constitutes the second of the situational variables mediating all antecedent vlasses of variables and most theoretically relevant to AEP.

Comments on the Research

To test the adequacy of the ISSTAL model as an explanation of AEP, a pilot study was conducted in the fall of 1982 on the Vancouver east side, the area of the city with the highest percentage of low income adults. A random sample of 35 household heads was selected for interview. Due to an oversight, interviewers made initial contact with prospective respondents at the door where they were met with reticence to participate. Combined with the number of addresses where no one was at home, and a large number of non-English-speaking immigrants, the original list was quickly exhausted. It was decided to counter these difficulties by relaxing the restrictions of randomness and the expectation of conducting only face-to-face interviews. Several respondents chose to treat the instrument as a self-administered questionnaire. Only 10 instruments were finally completed. A codebook was prepared and information was entered into the computer for "dry run" purposes only.

Despite the absence of meaningful data, the pilot study did produce insights helpful to the research now in progress. The Social Sciences and Humanities Research Council has now funded the project which provides for development and refinement of heretofore unmeasured variables specified and/or suggested by the ISSTAL model. It involves face-to-face interviews with 100 people resident to the same area of the pilot study. Initial contact by letter and prior appointment by telephone are now considered essential. Besides the SSHRC-funded study, to address the concern of several reviewers of the grant application about the amount of error variance "bouncing around" with so many independent variables and so few respondents, arrangements were being made at the time of this writing to adapt the instrument as a questionnaire and to distribute it to 1,000-1,500 adults enrolled in evening school programs in Vancouver and Richmond, B.C. The results of the analysis of these two related studies will be compared and reported as they become available.

REFERENCES

Cookson, Peter S. "An integrating and organizing framework for adult education participation research and theory." Unpublished m.s. 26 May 1982.

Cross, K. Patricia. Adults as learners. San Francisco: Jossey-Bass, 1981.

Houle, Cyril O. "How the individual adult approaches learning." Address delivered at the eighth National Cooperative Extension Administration Seminar, University of Wisconsin, May 3, 1965. (Mimeo)

Houle, Cyril O. The design of education. San Francisco: Jossey-Bass, 1972.

Johnstone, John W.C., and Rivera, Ramon J. Volunteers for learning. Chicago: Aldine, 1965.

Kohn, Melvin L. Class and conformity. Chicago: University of Chicago Press, 1969.

Kohn, Melvin L. and Schooler, Carmi. "Class, occupation, and orientation." American Sociological Review, 34 (5), October 1969, pp. 659-675.

Krajnc, Ana. The identification of educational values as a basic factor in adult education: A cross-national approach. Toronto: OISE, 1973.

Litchfield, Ann. The nature and pattern of participation in adult education activities. Unpublished Ph.D. dissertation, University of Chicago, 1965.

London, Jack and Wenkert, Robert. "Leisure styles and adult education." Adult Education, 20 (1), 1969, 3-22.

London, Jack, Wenkert, Robert, and Hagstrom, Warren O. Adult education and social class. Berkeley: University of California, Survey Research Center, 1963.

McClusky, Howard Y. "The relevance of psychology for adult education." In Jensen, Gale E., Liveright, A.A. and Hallenbeck, W. (Eds.). Adult education: Outlines of an emerging field of university study. Washington: AEA, 1964.

Meissner, Martin. "The long arm of the job." Industrial Relations, 10, 1971.

Payne, R., Payne, B.P., and Reddy, R.D. "Social background and role determinants of individual participation in organized voluntary action." In Smith, D.H., Reddy, R.D., and Baldwin, B.R. (Eds.). Voluntary action research: 1972. Lexington, Mass.: Heath, 1972.

Reddy, Richard D. "Individual philanthropy and giving behavior. In Smith, David H. (Ed.). Participation in social and political activities. San Francisco: Jossey-Bass, 1980.

Rokeach, Milton. The nature of human values. New York: Free Press, 1973.

Rubenson, Kjell. "Background and theoretical context." Mimeo. Vancouver: University of British Columbia Adult Education Research Centre, 1980.

Smith, D. H. (Ed.). Participation in social and political activities. San Francisco: Jossey-Bass, 1980.

Smith, D.H., and Reddy, R.D. "Contextual and organizational determinants of individual participation in organized voluntary action." In Smith, D.H., Reddy, R.D., and Baldwin, B.R. (Eds.). Voluntary action research: 1972. Lexington, Mass.: Heath, 1972.

Tough, Allen. The adults learning projects. Toronto: OISE, 1971.

Waniewicz, Ignacy. Demand for part-time learning in Ontario. Toronto: OISE, 1976.

WORKERS' EDUCATION IN ACTION:
ORGANIZING PACKINGHOUSE WORKERS IN CHICAGO, 1937-1943

Sue Davenport
Northern Illinois University

INTRODUCTION

While education has been traditionally conceived of as an institutional experience in which teachers teach and students learn facts and ideas, that definition tends to separate people's ideas from their actions, and to remove the discussion of ideas from social life into a classroom. The history of workers' education often focuses on mechanics institutes, vocational education, labor colleges, and union steward training programs. Yet, the dynamic struggles of workers in the short run, on the shop floor, and in the long run, to organize themselves, build a union, or seek political power are often the more important locus of workers' education.

The effort to organize workers necessarily links people's ideas and actions, and embeds the exchange of ideas in everyday situations - on the assembly line, in union meetings, at a bar, in study groups, at home, or in church. Often, organizers are aware of this educational process and deliberately strive to change the ideas, beliefs, and actions of their fellow workers. This intentionality of organizer-educators has sometimes been attacked as "propagandizing," for improperly mixing the realms of ideas and social action, and for violating the freedom of the individual to choose his ideas with collective social pressures. This research will attempt to show that education in action and education in the classroom are different forms of the same process.

This case study of workers' education in action is documenting the educational philosophy, strategy and tactics in a major and successful union organizing drive of the Congress of Industrial Unions (CIO) in the 1930's and 1940's, that of the Packinghouse Workers Organizing Committee in the Chicago stockyards from 1937 to 1943.[1] The meatpacking plants of Swift, Armour, and Wilson made Chicago the center of the nation's meatpacking industry, where the nauseating and oppressive conditions of "the jungle" had not changed substantially since Upton Sinclair had exposed them in 1906. Those conditions made Chicago the national headquarters

---

1. In 1943 the PWOC dissolved as the United Packinghouse Workers of America took its place as the collective bargaining agent for the majority of the nation's packinghouse workers.

2434 N. Spaulding, Chicago, Illinois 60647 (312) 227-5412

of the CIO organizing drive, and the site of PWOC's District #1 in the charged political atmsohpere of the 1930's.

This union organizing drive illustrates how workers' education is, in fact, "contested terrain,"[2] on which conflicting social forces vie for the consciousness and allegiance of workers. The central conflict was between the workers and the management of the major meatpackers (Armour, Swift, and Wilson). While management of the three companies chose different tactics to deal with restive workers (company unions, generous benefits, speed-up, instant firing of union supporters), they were united in their opposition to the organization of a CIO union. Management and the PWOC each attempted to draw to their side support from other leading city institutions, including the University of Chicago, the University of Chicago Settlement, the Catholic Church, the Chicago Police Department, and neighborhood organizations like the Chicago Urban League and the Back of the Yards Council. Meanwhile, within the PWOC different political tendencies, ranging from CIO staff persons, to veteran Chicago labor organizers, to members of the Young Communist League and the Communist Party) struggled to find common ground on which to unite workers and build a union.

My current focus is on the efforts of the PWOC to build Local #28 at the Swift and Co. plant during the organizing period, 1937-1943. This is part of a larger study that will compare the orgaizing campaigns at Swift, Armour, and Wilson, and analyze the involvement of other social institutions.

I am working with two main sets of questions, one about the consciousness of the workers in the union organizing period, and the other about the educational philosophy, strategy and tactics of the different elements in the PWOC.

The first set poses questions such as these -- How did workers view different levels of management, from the foreman up to plant superintendents to the company owners? How did workers deal with the insecurity and harshness of their jobs before the PWOC emerged? How did workers view the differences among themselves - of race, ethnic background, sex, skill level? How class conscious were workers?Did they just have "trade union" or "job consciousness", as John Commons and Selig Perlman, early labor historians argued and conservative labor leaders accepted? What kinds of changes did packinghouse workers want to see in America of the 30's Depression? How interested in socialism or sympathetic to communism were they? How did rank and file members, union activists, and political organizers differ in their perceptions of the same events and practices?

2. Richard Edwards. Contested Terrain: The Transformation of the Workplace in the Twentieth Century. New York: Basic Books, 1977.

The second set of questions focuses on the educational campaign of the PWOC. How did the different political tendencies within the PWOC advocate using the written and spoken word, organizing meetings, recruiting members, training leaders? How did they plan these educational efforts, staff and evaluate them? Under what conditions and for what reasons did educational campaigns become institutionalized in the organization? How did organizers learn to organize - informally, apprentice-style, in training schools? How did leaders emerge? What was the Communist Party's theory of "mass education"? How did adherence to an international line and democratic centralism in the CP influence efforts to teach workers theory, history, analytical and strategic thinking?

METHODOLOGY

The two primary methods I use in this research, now in progress, are oral interviews and documentary research. Several extensive interviews with former PWOC leaders have been done in the past ten years, transcribed and made public. One leader, Vicki Starr, for instance, a packinghouse organizer at Swift and Co. from 1933 to 1945 and member of the Young Communist League, stars in the film "Union Maids," and appears both in Alice and Staughton Lynd's book, Rank and File and in Ann Banks' First Person America, based on Works Progress Administration narratives from the Depression. She and other PWOC activists are available for interview. Rank and file members I am locating through personal contacts, neighborhood organizations,union networks, and local newspaper ads.

The second method is to use primary materials, including contemporary newspapers, organizational records, and personal memorabilia. The newspapers range from the Chicago Daily News, Chicago Tribune, Chicago Defender, CIO News: Packinghouse Edition, and the Midwest Daily Record (CP).

SIGNIFICANCE

Recent labor history has moved away from the Commons-Perlman focus on organizationalhistory to consider questions of the unorganized and rank-and-file worker, workers' culture, community life, and class formation. (David Montgomery, Herbert Gutman, Alice Kessler-Harris). The revisionist literature in the history of education has, from a number of starting points, tried to develop a class analysis of education, linking knowledge to power, and examining the processes that create, legitimate and transmit knowledge. (Samuel Bowles and Herbert Gintis, Michael Katz, Marvin Lazerson, Michael Apple, Basil Bernstein.)

In adult education, a growing body of historical work has challenged the view of the lyceum, Chatauqua, Americanization classes and the G.E.D. diploma as a cornerstone of the American "paideia" of public education. (C. Hartley Grattan, Malcolm Knowles, Lawrence Cremin). Recent work suggests contrasting dynamics of elitism, exclusion, and cultural domination. (Robert Carlson, Maxine Sellers, Kathleen Rockhill). This PWOC study could contribute working class perspectives on adult education, and illustrate that there is a political dimension to adult education, whatever the institutional or social context.

Another contribution to adult education that this study could make would be to demonstrate ways in which Paulo Freire's analysis of education as a tool of imperial domination might be helpful to understanding the history of adult education. As a social worker and teacher in Brazil, Freire developed a theory and practice of education as a process of political "consciencizacion." He argues that education is the process in which oppressed people learn to name, analyze and struggle against their oppression for personal and social transformation. While Freire's approach to education has been used most commonly in developing nations combatting colonialism, Freire's analysis may well help us understand educational situations in advanced capitalist societies.

SELECTED REFERENCES

Barrett, James R. Work and Community in "The Jungle": Chicago's Packing House Workers, 1894-1922. University of Pittsburgh PhD., 1981.

Bernstein, Basil. Class,Codes and Control, Volume 3: Towards a Theory of Educational Transmissions. Boston: Routledge and Kegan Paul, 1975.

Brody, David. Workers in Industrial America, Essays on the Twentieth Century Struggle. New York: Oxford University Press, 1980.

Dwyer, Richard E. "Workers' Education, Labor Education, Labor Studies: An Historical Delineation," Review of Educational Research, vol. 47, no. 1 (1977) 179-207.

Edwards, Richard. Contested Terrain: The Transformation of the Workplace in the Twentieth Century. New York: Basic Books, 1977.

Freire, Paulo. Pedagogy of the Oppressed. New York: The Seabury Press, 1973.

Grattan, C. Hartley. In Quest of Knowledge: A Historical Perspective on Adult Education. New York: Association Press, 1955.

Horwitt, Sanford D. Saul D. Alinsky and a Rhetoric of the Power Strategy as a Means of Social Change. Northwestern University thesis, 1970.

Keeran, Roger. The Communist Party and the Auto Workers Union. Bloomington: Indiana University Press, 1980.

Lyons, Paul. Philadelphia Communists, 1936-1956. Philadelphia: Temple University Press, 1982.

Purcell, Theodore V., S. J. The Worker Speaks His Mind on Company and Union. Cambridge: Harvard Univeristy Press, 1953.

EDUCATIONAL POTENTIAL OF INTERACTIVE VIDEO TECHNOLOGY: AN EVALUATION OF A PILOT PROJECT

David Deshler and Geri Gay
Cornell University

INTRODUCTION

Interactive video is the joint product of two technologies, each of which has developed rapidly over the past two decades: video and computers. Interactive video can be described as a combination of computer aided instruction (CAI) and random access video. In all applications of interactive video, the videotape is simply a means of storing and displaying "real image" (more than graphic) information. The interactive unit consists of a 1/2" video cassette recorder (VCR) which plays the programmed learning materials onto any television monitor, an interface device which permits the computer to control the direction, speed and access points on the video player, and a micro computer which controls the program via the microcomputer keyboard. According to the appropriateness of the response given by the learner, the program branches out to new material or reviews material via print or video segments. A printer unit enables the instructor and the learner to monitor the precise degree of learning participation and understanding through interactive questions.

METHODOLOGY

A pilot interactive video instruction module was produced, field tested with 22 learners and evaluated at Cornell University in the fall of 1982. The module on floriculture was produced by the Communication Arts Video Communication Laboratory for use by undergraduates and Cooperative Extension clients.

Objectives of the evaluation included:

1) testing learner outcomes;
2) assessment of learner reactions to use of interactive video;
3) determination of production feasibility of medium for use in higher education and extension educational settings; and
4) exploration of potential use of interactive video to achieve various educational goals.

The evaluation was conceptualized as a naturalistic experiment using Robert Stake's responsive evaluation method, which is appropriate for a developmental project. This method emphasizes the gathering of data in response to emergent evaluation foci during the course of the evaluation in contrast to a preordinate approach that emphasizes the identification of all needed information at the outset (Stake, 1977). Data included:

David Deshler, Associate Professor, Dept. Human Service Studies; Geri Gay, Associate Director, Communication Arts Video Communication Laboratory, Cornell University, Ithaca, NY 14853.

1) instructional testing built into the computer design;
2) a structured, open-ended questionnaire, also built into the computer design;
3) observation of learners' verbal and non-verbal behaviors while they were working with the interactive programming by six trained observers; and
4) elite and specialized interviewing of a panel of representatives from college administration, extension, computer design, instructional design, and the content area.

Qualitative content analysis was performed on computer evaluations, observations, and interview data.

FINDINGS

Findings will be reported in brief for instructional outcomes, learner reactions, production feasibility and potential use.

Instructional Outcomes. Although all learners who used the module were able to comprehend concepts taught with test scores ranging from 51 to 98 on a 100 pt scale with a median score of 80, learners who used the review capacity of the module for remedial purposes obtained higher scores. In other words, over-confidence in comprehension apparently affects test scores. Since the evaluators were unable to obtain pre and post test data or comparative data from learners who were provided alternative forms of instruction on the same material, a knowledge claim that outcomes are superior cannot be made.

Learner Reactions. All learners were observed unobstrusively as they operated the equipment in order to note non verbal and verbal reactions to the instructional setting. Nonverbal data were compared with questionnaire reactions answered on the computer. It was found that, as expected, learners who had had previous experience with computers or video games were less intimidated by interactive video than were learners who had no previous experience. Almost all students indicated that they enjoyed the experience and that it was an involving and interesting way to learn.

Production Feasibility. Producing an interactive video production requires a team approach. No one individual usually has the skills, attributes, perspectives and content knowledge to do it on his/her own. The team members are required to have video production competency, instructional and curriculum design background, computer programming capability as well as competency in the subject matter. There is enormous potential for the medium, but one should not underestimate the skills and time needed by a video laboratory and cooperating faculty for successful development of interactive video programming. Analysis of data from the production process indicated that:

- Producing an interactive video is much more complex than conventional production, due to the non-linear nature of interactive programming. Random accessibility allows the producer/designer to develope interactive strategies enabling the learner to become directly involved with the program (Seidel, 1975).

- Concept mapping (Gowin, 1981)) was a helpful technique of analysis used to show what the conceptual structure of the instructional program might look like. Key concepts are outlined and then organized into a flow chart.
- The use of flowcharting procedure was judged to be an essential tool in planning (Dargan, 1981; Daynes, 1982).
- Involvement in interactive programming was found to be costly in terms of faculty time. Faculty tend to underestimate the time required by 10:1 ratio. It is equivalent to writing a book or a monograph.
- The micro-computer interface equipment that is required includes the following items with their estimated costs. (Further details in Gay, 1982).

1/2" random access video player/recorder	$1550-1785
Apple computer	1595-2300
Monitor	400
Computer video interface card	945
Authoring language (optional)	500-1000

- It is not economically feasible to produce interactive video unless large numbers of learners use the same material over a large period of time. It should be considered a mass media approach which requires financing and distribution cooperation from a publisher with faculty participation.
- Before designing an interactive program, faculty members should receive training in video production, instructional design, and computing.
- Faculty members must have a conception of the potential of interactive video to make best use of the medium.
- Following are the characteristics of faculty members who are most likely to facilitate effective use of interactive video:

  a) willingness to assume leadership in development of program;
  b) non-defensive attitude;
  c) capacity to reflect from perspective of student learning;
  d) willingness to explore alternative approaches to education;
  e) commitment to excellence in development of program;
  f) investment in and commitment to improvement of instruction.

One consequence of the pilot production of the module was the generation of extensive interest on the part of faculty. Over 160 faculty members have expressed interest through participation in the Video Lab's two interactive workshops and small group sessions. However, a word of caution is in order. Few faculty members are trained in instructional or curriculum design and at the same time have an understanding of either video or computing requirements. It is not feasible to work with faculty solely on the basis of their enthusiasm.

Potential Use. The state of the art is far too undeveloped for anticipation of normative forms. Alternatives need to be explored in such a manner that allows the testing of alternative curriculm designs. It is quite clear that this medium should not be used as a substitute for lecture or laboratory instruction but rather for instruction which utilizes its unique potential. This means rethinking instructional possibilities using visual quantitative, and qualitative data sources in highly complex patterns, with sequencing that can be controlled by the learner. Faculty members who reviewed the production typically identified alternatives to the curriculum design which would build greater challenge and interest into a module. For instance, thousands of slides, graphics and multiple audio tracks can be added to video tape or disc and can be immediately called up by the learner. The learner can compose responses which can be printed out as a product of the experience. Stop action is possible on any frame of a motion sequence. Data sources can be used in conjunction with visual changes in a displayed phenomenon. Learners are able to receive immediate feedback from these interactions. The following possibilities have been suggested:

- Emphasize cases or problems which involve learners in the manipulation processing of information for analysis, synthesis or evaluative judgments rather than merely requiring comprehension responses.
- Emphasize the posing of visual problems or questions which learners can analyze and manipulate through the use of alternate data, concepts, principles or theories.
- Explore the use of simulations, gaming and surrogate experience in order to take advantage of the dynamic that is captivating in many computer games.
- Explore the relationship between learning styles and various designs in order to understand diversity of reactions to interactive video.

Zollman and Fuller (1982) have provided an excellent example of interactive video which involves the learner in questioning alternative physics explanations to the Tacoma Narrows Bridge disaster which is shown on video disc. The teacher's manual by Fuller, Zollman and Campbell (1982) for this module explains the exploratory mode of investigation which requires the learners to draw their own conclusions after exploring data, concepts, principles and visual images of what occurred. Another example that uses the expanded capacity of the medium is the interactive movie map (Mohl, 1980) which is a computer controlled video disc based system. It simultaneously displays two representations of a visual environment -street level and aerial view. Learners can "drive" around viewing footage through surrogate travel while they have complete control over speed, direction of travel, direction of view, route selection and even choose the season of the year. In addition, learners can choose to view slides of the interior of specific buildings. Examples will undoubtedly multiply within the next several years as the potential is recognized and explored.

IMPLICATIONS

The advent of interactive video has extensive implications for adult learners, adult educators, and educational agency providers. For learners, the major advantage may mean increased involvement and control of the learning process. According to DeBloois (1979) and Salomon (1979) there is a very positive correlation between learner involvement as viewers and learning.

However, the interaction between learners and machines is far from being understood and further research is required to assess the limitations of person/machine learning and work situations. Another advantage of interactive media is that learners may feel more control over their learning pace and also may be less embarrassed by their own mistakes. Control and embarrassment may be important variables for further research. In general we know that learners appear to enjoy instruction after they get over their initial introduction to the technology. They may even become addicted. Unfortunately there is an absence of reported research concerning why this takes place.

This evaluation has alerted us to the fact that there is a growing demand for personnel who have the capacity to design software. The gulf between communications technologists and educators who know curriculum design must be bridged. The quality of interactive video depends on this unity. Poor production will likely occur if only subject matter specialists team with technologists.

It is anyone's guess how rapidly interactive technology will become available to individuals for home use. A number of universities are considering it for library and department use. It is our prediction that new communication technologies will have a major impact upon instruction in the next few years. Very few researchers are assessing the effect of these technologies on the individual learner. It is imperative that we continue to evaluate the implications, potential and best instructional designs for this new medium. At present and in the immediate foreseeable future opportunities for adult learner access will be quite limited due to restraints on availability of equipment on the part of adult education providers. In all probability the military and industry will most likely pioneer its use and our educational institutions will lag behind. One can be very sure that the commercial aspects of this new development will not be overlooked by publishers and hardware suppliers.

REFERENCES

Dargan, Thomas R. "Flowcharting - The Key to Interactive Video." *E-ITV Magazine*. 51 Sugar Hollow Rd., Danbury, CT 06810: Vol. 13, No. 11, November 1981.

Daynes, Rod. "The Videodisc Interfacing Primer." *BYTE*: *The Small Systems Journal*. Vol. 7, No. 6, June 1982.

DeBloois, M. Exploring new design models. *Educational and Industrial Television*, 1979, 11, 34-36.

Dexter, Lewis A. *Elite and Specialized Interviewing*. Evanston, IL; Northwestern University Press, 1970.

Fuller, Robert; Dean Zollman and Thomas Campbell. *Teacher's Manual to Accompany the Puzzle of the Tacoma Narrows Bridge Collapse Videodisc*. New York: John Wiley and Sons. 1982.

Gay, Geri. "Interactive Video Project Report," Cornell University, Communication Arts Video Commnication Laboratory (unpublished document) 1982.

Gowin, D. Bob. *Educating*. Ithaca, NY: Cornell University Press, 1981, pp. 94-95.

Mohl, Robert. "The Interactive Movie Map. Surrogate Travel With the Aid of Dynamic Aerial Overviews." Paper presented at 1980 Midcon Professional Program, Dallas, Texas, November 4, 1980.

Salomon, G. "Media and Symbol System as Related to Cognition and Learning." *Journal of Educational Psychology*, 1979, 91, 131-148.

Seidel, R.J. *Learner Contol of Instructional Sequencing Within an Adaptive Tutorial CAI environment*. (Hum RRO Tech. Rep. 75-77). Alexandria, VA: Human Resources Research Organization, June 1975.

Stake, Robert. *Program Evaluation: Particularly Responsive Evaluation. Occasional Paper #5*. Kalamzaoo, Michigan: Kalamazoo Evaluation Center, Western Michigan University, 1975.

Zollman, Dean and Robert Fuller. "The Puzzle of the Tacoma Narrows Bridge Collapse: An Interactive Videodisc Program for Physics Instruction." *Creative Computing*, Vol 8, No. 10, October 1982.

PRISON EDUCATION: A CASE FOR THE LIBERAL ARTS

Stephen Duguid, Simon Fraser University

We have all become familiar in recent years with the metaphor of the school as prison. My work and that of several colleagues in the Corrections Service of Canada and several Canadian universities centres on reversing the metaphor, and transforming prisons into schools. This is not a new idea. Thomas Mott Osborne put the case quite eloquently in 1924:

> Not until we think of our prisons as in reality educational institutions shall we come within sight of a successful system; and by a successful system I mean one that not only ensures a quiet, orderly, well-behaved prison but has genuine life in it as well; one that restores to society the largest number of intelligent, forceful, honest citizens.
>
> (in Campbell)

The prison is thus transformed into a school, and not a school for crime but a school for the creation of citizens. Implicit in this vision is a theory of criminality, that it is at base poor citizenship and that it springs from immaturity - a breakdown in the learning process. The prison thus becomes an intervention, a place where that learning process may begin anew.

But what kind of education, what kind of learning should take place in the prison? For political, economic, and humanistic reasons, it must be an education concerned with outcomes, specifically it must be designed to at least in part affect attitudes and behaviour. Commonly this has meant literacy training, secondary school accreditation, and vocational training. The results have never been impressive by any generally accepted measurement. This focus on attitudinal and behaviouristic outcomes coupled with my own experience teaching university courses to prisoners at three British Columbia prisons from 1974-1980 and in Alaska from 1980-1981, has led me to the conclusion that a liberal education with a focus on the humanities is the correct way to go.

There are three strands of thought which lie at the base of this argument for education in prison, and for that education being focused on the liberal arts. The first centres on the prison itself, whether anything of a developmental nature can take place in such an environment. The second is the relationship of cognitive-moral development theory to the origins of criminal behaviour and to the habilitation of the criminal. Finally, the third consists of work being done on the effects of a liberal arts/humanities education, and usefulness of such an education to adult prisoners.

Prison education must take place in a prison. It is important, therefore, for practitioners to come to some conclusions about the nature of the prison and the prison experience. If one follows the lead of writers such as Bettelheim, Sykes, Clemmer, and Goffman, the possibilities for prison education are bleak indeed. Their analyses and descriptions of prisons and their impact on the individual reveal the "...deprivations and frustrations of institutional life which lead to the partial loss of personal autonomy, impersonalization, marginality, mortification, status

---

Stephen Duguid, Office of Continuing Studies, Simon Fraser University,
Burnaby, B.C. V5A 1S6

degradation, and loss of identification with the normal adult role." (Roebuck) On the other hand, the work of Irwin and Cressy, Cohen and Taylor, Hepburn, and Sapsford indicates that prisoners enter the prison as members of subcultures and that membership remains the dominant factor in behaviour. Thus the values of the "inmate code" which Sykes attributes to the nature of the prison, may in fact be values imported into the prison or at worst a temporary adaptation to the prison. (Garabedian)

My experience at both medium and maximum security prisons convinced me that the criminalization approach was more appropriate. The prison, for all its horrors and restrictions, did not manufacture through its existence a set of values, attitudes, or behaviours - these were already part of the repertoire of most prisoners. This was certainly true of the career offenders or professional criminals, the group that this paper is concerned with. Once this view is accepted the prison becomes a more neutral context for education, and the task of understanding the attributes and learning needs of the students must involve their pre-incarceration experiences.

The most startling aspect of criminal behaviour is its consistency. Of the 65 men included in the follow-up study of the University of Victoria Program at Matsqui Institution, there was an average of six periods of incarceration as adults. The average age of first juvenile incarceration was 15, and they experienced an average of three such periods prior to embarking on their adult careers. The origin of these criminal careers remains obscure. It is clear, however, that once labeled a juvenile delinquent or criminal, and once involved in the structural apparatus that usually accompanies being so labeled, the individual becomes quite unique, set apart from peers. He is different because of the label, self-image, associates, and most important, because his reasoning, both cognitive and moral, is unique. It is this reasoning that seals the pattern of decision-making that results in the cycle of criminal behaviour. (Duguid)

Thus along with Ross, Ayers, and Feuerstein, I have focused on reasoning and decision-making as the basis for criminal behaviour. Specifically, the argument is that for a variety of reasons, including poor educational backgrounds, criminals tend to suffer from cognitive deficits and deficits in moral reasoning ability. Put another way, there is a poorly developed problem-solving and decision-making ability. Feuerstein refers to these deficits in terms of things not being perceived in enough detail, in the lack of proper distance between a given input and act, leading to a generalized impulsiveness, and an inability to compare long versus short term outcomes of decisions. Henshel points out how these deficits directly affect deterrence since sanctions depend on a grasp of cause and effect, and the ability to plan for the future. Ross sees the issue in terms of putting these individuals "at risk" in society, not causing criminal behaviour, but merely making it a more likely outcome of problem-solving and decision-making. Thus while many citizens can function quite well at these levels of cognitive and moral development, the criminal cannot since his associations, skills, and predilictions demand a more complex and developed level of reasoning if he is to avoid certain behaviours.

Coupled with these cognitive factors is the question of how the individual interprets what he sees in a moral sense. According to Kohlberg, there is a structural matrix to values as well as to reasoning. The cognitive structure is the base but it is only a necessary, not a sufficient condition for parallel levels of moral reasoning. Research by Kohlberg and others indicates that "...criminal offenders are remarkably lower in moral judgment development than are non-offenders of the same social background."

Following Piaget in the cognitive realm, Kohlberg sees moral reasoning as a developmental skill, subject to change from external sources.

This, finally, leads me to education. It would appear obvious that education provides one of the most direct and effective ways to address this issue of cognitive development and its corollary, the development of moral reasoning. It must be education tied to the goal of development in order to avoid merely producing more educated criminals. In the end, it must be a civilizing experience, one which stretches existing thinking and encourages a re-evaluation of values. It dare not be obsessed with facts or data, relativistic in its moral dimension, or divorced from the realities of the students' lives. Neither should it pander to their situation or join in their self-perceived victimization.

A liberal education with a focus on the humanities fits the criterion discussed above. According to Chickering, a liberal education serves to free the individual from the limitations of outlook brought on by his locale, family, social class, or national heritage. We could add without hesitation the factors of peer group, labeling, the prison, and criminal activity and thus demonstrate the direct relevance of this approach to prison education. Research by Heath likewise shows that a liberal education affects egocentrism, stability, notions of cause and effect, and self-control, all clearly related to the developmental goals of prison education. In a major new study of the effects of liberal education, Winters discusses in detail the potential outcomes of such an experience, finding for instance, that liberal arts students were more prone to think of the world in terms of cause and effect, and imagine people as acting in ways that have consequences. Winters also found increases in empathy and intellectual flexibility, the ability to be committed to one position while understanding diverse views, to see elements of truth on all sides of a controversy, and a much more sophisticated understanding of power and authority.

CASE STUDY: THE UNIVERSITY OF VICTORIA PROGRAM AT MATSQUI INSTITUTION

The University of Victoria Program in British Columbia embodies each of these strands of thought, e.g., that personal growth is possible in prison, that cognitive and moral reasoning development are the proper goals of prison education, and that the liberal arts are the best means for achieving these goals. The U-Vic program began as an experiment designed to test the effects of a humanities based curriculum on prison inmates. A three month series of courses was offered to about thirty men at the old B.C. Penitentiary in 1972, with a control group selected at random. A variety of pre and post tests were administered, and the results were significant enough to arouse the interests of the Corrections Service and the university researchers involved. (see Linden)

After a few false starts later in 1972, funding was eventually obtained to offer a full-time university program at the BCP and at Matsqui prison.

When I arrived in 1974 as an instructor in history, the program at the two prisons offered a variety of 1st and 2nd year university courses for full credit, with history and English literature being required, and philosophy, sociology, and psychology being electives. The choice of curriculum was shaped by the program's interest in furthering both cognitive and moral development, the humanities being seen as the best vehicles for such development.

Because of a series of disturbances and the gradual phasing out of the BCP, Matsqui Institution became the larger of the two programs by 1976, at its peak consisting of about 75 students per academic term. Each student was required to complete the core humanities requirements, the remainder of his courses being chosen from a wide range of electives. By 1977, student pressure led to the introduction of 3rd and 4th year courses and, inevitably, to a series of BA degrees being granted. Each term there were an average of eight instructors teaching at each prison, with two being full-time and the rest sessionals. The instructors were either from the University or hired by the University to teach in the prison program. At Matsqui the program functioned in a building set apart from the main prison area with no institutional staff in the area. As a result, both University staff and students had a great deal of autonomy and complete responsibility for maintaining order within the program area.

A key feature of the program was the attempt to develop an 'alternative community' within the prison, somewhat akin to Kohlberg's idea of a just community. Decision-making was made more and more democratic, student council given a major role in program affairs, and every move toward authoritarian solutions on the part of either staff or students was countered. (Duguid)

All of the students were volunteers, some having come from the prison high school program and others (the majority) entering university directly as mature students. They were subject to all University academic requirements such as minimum course loads and minimum grade point averages. Since this was a Federal prison, all of the men had sentences of two years or more - the average sentence at Matsqui being five years. The average age of the student body was 31, and the average educational level was grade nine (one year higher than the prison average). Over 50% of the men studied in the follow-up study were heroin users with a smaller percentage being alcoholics or users of other drugs. The offences ranged from forgery to murder, with the emphasis being on the more serious, e.g., drug traffic, armed robbery, assault.

The program had three salient features which should be kept in mind in assessing its evaluation. First, the curriculum always remained centered on the humanities core, and approached these subjects in a very traditional manner with no attempt to 'address' the prison context. Second, the presence of outside university teachers in the prison five days a week, seven hours a day resulted in a strong counselling factor. Third, the sense of community engendered by the program made it a truly unique environment in the prison.

THE FOLLOW-UP STUDY

In 1979, it was decided to carry out a follow-up study of men who had completed a minimum number of courses and been released during the 1976-1979 period. A total of 75 met the criteria. Of these, 33 were interviewed and asked to fill out a questionnaire designed to elicit their perceptions of the program's effect, and determine certain demographic information about post-release behaviour. The other men in the group were followed-up through parole and police files. In order to compile data on recidivism, a comparison group of 75 men released during the same time period at the same intervals was assembled, men who had not attended the U-Vic program. In comparing the two groups, no significant differences were found in terms of age, length of sentence, prior criminal record, or Base Expectancy/Recidivism Prediction Scores. There was a two grade difference (8-10) in levels of education prior to incarceration, but it is important to note that 65% of the University group had not completed high school, and 25% were grade 8 or below. This educational advantage may have been offset by the fact that the University group had significantly more drug addicts than the Comparison group.

The data from the interviews, questionaires, and research was examined from three perspectives: 1) attitude change; 2) achieving stability in society; and 3) further contact with the law. In brief, the results were as follows:

A. There appeared to be dramatic changes in the ex-students' attitudes toward issues such as family relations, politics, and crime, with direct attribution of the program as the cause of the change.
B. There were interesting but less substantial indications of change in attitude toward race, sex, friendship or career.
C. There was strong evidence of upward mobility in some of the men's careers and dramatic evidence of job stability. Only one of the 33 was unemployed when interviewed.
D. Some men continued their education after release, a few finishing degrees and some going on to graduate school. Most, however, were employed at vocations not unlike those pursued prior to incarceration.
E. Most striking and, though hoped for nonetheless unanticipated, was a very low recidivism rate. Of the 75 men studied, only 10 had had any further contact with the law after release, compared with 50% for the Comparison group of non-students. The Canadian average is also about 50%.

Upon completion of the study, the Corrections Service of Canada commissioned an 'evaluation of the evaluation' by Robert Ross of the University of Ottawa. In his report Ross raised several questions concerning the design of the study, the issue of self-selection, and the danger of over-optimistic conclusions, but he concluded that:

> My review of U-Vic leads me to conclude that in most respects its conceptualization is sound; its program innovative, in some respects exemplary and certainly in accord with principles for effective correctional intervention; its model for intervention through education rather than therapy, appropriate; and the evidence for its efficacy, though not unequivocal, exceptionally encouraging.

DISCUSSION

For those searching for 'proof' of program effects, this study will be woefully inadequate. It is a "quasi-experimental design" which could not control for the selection and assignment of students. Random selection was clearly inappropriate for an effort such as this. Thus, while students were not selected, they obviously did self-select. All prisoners at Matsqui Institution selected a place of employment, the University program being one. For some it was desireable, for others it was not. From personal observation I am convinced that the program did not attract a prison elite, nor a particularly highly motivated individual. Once enrolled, however, the prisoner had to work hard and become motivated, or select out or be selected out by the normal University process. Did the program only attract high achievers? I would say no, but cannot prove it. Did the program end up with only the highly motivated? Yes, but the program itself no doubt played a role in making them high achievers.

There are other "problems" with the results of the study. Normal maturation may have been a factor in program success. There is evidence that many criminals opt out of crime in their late 30's. The program may have benefitted from this and, more important, may have been a decisive factor in encouraging it. Even more difficult, it is impossible to 'tease out' the specific cause(s) of program success. Modelling by teachers was a factor, along with strong new peer relations, the actual courses, the democratic community, a sense of improved life chances, higher self-esteem, etc.

What is clear is that a higher education program in the liberal arts which took place in prison had much the same results that researchers have been saying a liberal arts education should have. What is most significant here, however, is that there seems to be clear evidence linking these effects to changes in behaviour.

BIBLIOGRAPHY

Ayers, J.D., et. al., (1980). "Effects of the University of Victoria Program: A Post-Release Study", Report to Corrections Service of Canada.

Campbell, D. (1974). "Developing Continuing Education in the Correctional Institution", Canadian Journal of Criminology & Corrections, v.16:2

Chickering, A. (1969). Education & Identity, SF: Jossey-Bass.

Cohen, S. & Taylor, L. (1977). Psychological Survival, Penguin.

Duguid, S. (1981). "Prison Education & Criminal Choice: The Context of Decision Making", Canadian Journal of Criminology, Oct.

Feuerstein, R. (1980). Videotaped Interview, Corrections Service of Canada.

Garabedian, P. (1963). "Social Roles and Processes of Socialization in the Prison Community", Social Problems, v.11.

Heath, D. (1968). Growing Up in College, SF: Jossey-Bass.

Henshel, R., ed. (1975). Perception in Criminology, NY: Columbia University Press.

Hepburn, J. (1977). "Total Institutions and Inmate Self-Esteem", British Journal of Criminology, v. 17:3.

Irwin, S. & Cressy, D. (1960). Theoretical Studies in the Social Organization of the Prison, Social Science Research Council.

Kohlberg, L., et.al., (1974). The Just Community Approach to Corrections, Harvard Moral Education Research Foundation.

Linden, R. et.al., (1979). "An Evaluation of a Prison Education Program", Report to the Corrections Service of Canada.

Roebuck, J. (1963). "A Critique of Thieves, Convicts and the Inmate Culture", Social Problems, v.11:2.

Ross, R. (1978). "Behavioural Approaches to Treatment in Corrections: Requiem for a Panacea", Canadian Journal of Criminology, v.20:2.

Ross, R. (1980). "Socio-Cognitive Development of the Offender: An External Review of the U-Vic Program at Matsqui", Report to Corrections Service of Canada.

Sapsford, R. (1978). "Life Sentence Prisoners: Psychological Changes During Sentence", British Journal of Criminology, v.18:2.

Winter, D. et.al., (1981). A New Case for the Liberal Arts, SF: Jossey-Bass.

NEW TEST FOR BRAIN HEMISPHERE PREFERENCE: IMPLICATIONS FOR IN-CLASS PROCEDURES AND INSTRUCTIONAL TECHNIQUES

Mary Jane Even, University of Nebraska-Lincoln
Terese Lux, University of Nebraska-Lincoln

The awareness of the potentiality of the interdisciplinary research on hemisphere brain preference for adult educators, and for instructors in particular, has been the catalyst for continued interpolation and analysis of the theme provided in this study. Though extensive research efforts by neurophysiologists and neurologists, by psychiatrists and psychologists have focused on the human brain in the past two decades, recent discoveries of the plasticity of the human brain, its split brain functions, and related capacities, need further interpolation, analysis and application for adult educators.

Hemisphere brain preference has important implications for the elements, events, role analysis and experiences which adult educators address in their literature and practice. For example, brain preferences influence the total learning experience; the instructor's choice of method, techniques and devices; the nature of perception, attention, motivation, decision-making among persons, as well as the ways choices are made, plans developed, goals established, upon living habits, among others. The theory of hemisphere brain preference addresses these complex variables in either an implicit or explicit manner.

Though testing for hemisphere preference has been either clinical (with machines) or cursory (with figures), a reliable device or instrument which could be used by adult educators for everyday use needed to be developed. Indeed, in the daily practice of adult educators, and of instructors, application of this research can only be appropriately applied when a reliable means to test for difference can be used. Appropriate application of brain preference research in all aspects of teaching and learning experiences could be facilitated by the use of an instrument capable of disciminating hemisphere preference in individuals. Such an instrument has not been developed by the neurophysiologists or psychologists who developed the original split brain research because of their interests and available clinical testing machinery. The great need for an educationally relevant instrument was recognized by Paul Torrance in 1978 and 1980 at Georgia. He developed three simple verbal instruments for determining hemisphericity which could be used by educators. Upon use and analysis these three tests however were found to be biased against the right hemisphere respondents as they employ all verbal (words) response modes. Concern over this bias has resulted in the development of an instrument which clearly accomodates right brain as well as left brain preference modalities. In addition, Torrance recognized another potential alternative modality. It is mixed "or"integrated" or "alternate." Though this study and development of testing instrument has accomodated the "mixed" or "integrated" modality, a fourth modality of "bi-modal" has also resulted in the analysis of persons using the new instrument.

April 9, 1983 AERC University of Montreal, Quebec, Canada

Dr. Mary Jane Even is currently Associate Professor of Adult and Continuing Education, University of Nebraska-Lincoln, 61 Henzlik Hall, Lincoln, Nebraska 68588-0349.

Terese Lux is currently a graduate student in the Community and Human Resource Doctoral Program, Teachers College, University of Nebraska-Lincoln.

Thus the purpose of this study was to generate a simple, easy to use, statistically sound, instrument specifically designed for educators which discriminates brain preference. It was the next step toward interpolating split brain research for adult educators. An examination of the conceptual framework, methodology, test development and results and implications for educational practice follows.

Conceptual Framework

During the past twenty years specialization within the brains two hemispheres has been not only identified through split-brain experiments with brain-damaged patients but also with non-patients or normal persons. The two cerebral hemispheres in normal persons differ functionally as well as anatomically and result in alternative patterns for processing information and two distinctly different approaches to the world of experience, work, learning, teaching, living and problem solving. The left hemisphere is specialized for verbal, sequential, mathematical, logical, analytical and rational functions while the right hemisphere is specialized for nonverbal, simultaneous, spatial, analogical, synthetic, relational, holistic and intuitive functions. The choice of the kind of thought or information processing to be used is the relatively stable way an individual perceives, conceptualizes and organizes information. A person tends to depend primarily on either the left or right in daily life, and this preference is not related to type of material, emotion or task.

The right and the left hemispheres are specialized for specific functions such that one hemisphere may be relatively more capable of performing a function than the other hemisphere is, or, one hemisphere may be unable to perform a specific function at all. Furthermore, the hemispheres actively and selectively extract information from the environment in the form of percepts which then animate internal brain structures in one or both of the hemispheres such that learning takes place. An individual's preferential use of his or her cerebral hemispheres affects the extraction of data from the environment, the internal processing of data, and the outward expression resulting from the data selection and specific processing.

Hemisphere specializations are generally identified as dichotomies which tend to accentuate differences between the hemispheres. Some of the dichotomous terms that have been used to describe the different perceptual organizations in the left and right hemispheres, respectively, have been extensively researched: analytic vs. gestalt (Levy-Agresti & Sperry, 1968), propositional vs. appositional (Bogen, 1969), analytic thinking vs. relational thinking (Cohen, 1969), symbolic vs. visuospatial (Levy, Trevarthen, & Sperry, 1972), verbal vs. nonverbal thinking (Sperry, 1973), time-dependent vs. time-independent (Gazzaniga, 1975), and analytic vs. holistic (Bradshaw, Gates, and Patterson, 1976).

Commenting on the various terms used by researchers, Nebes (1974) stated: "The concepts of hemisphere action implied by these terms . . . are very similar in that they all assign to the major [left] hemisphere the tasks of sequentially analyzing sensory input, abstracting out the relevant details, and attaching verbal labels, while the right hemisphere attends to the overall configuration of the stimulus situation, synthesizing the fragmentary chunks of perceptual data received from sampling of the sensory surround into a meaningful percept of the environment. The right hemisphere is thus viewed as giving spatial context to the detailed analysis carried out by the major hemisphere" (p. 156). In addition, Levy and Trevarthen (1976), among others, showed that

BEST COPY AVAILABLE

in normal persons, either the right-brain or the left-brain tends to dominate in ordinary situations, whether or not it is the hemisphere more capable of performing the required task. Bogen, DeZure, TenHouten, and Marsh (1972) coined the term "hemisphericity" to identify the tendency whereby an individual uses or engages one hemisphere more than the other in ordinary functioning.

Torrance (Torrance, Reynolds, Ball, & Riegel, 1978; Torrance & Reynolds, 1980) and his colleagues at Georgia identified a third category of hemisphericity. This third category recognizes that some persons in performing tasks tend to combine the specializations of the right and of the left hemispheres in a mixed mode. The physiological structure which makes a mixed mode possible is the corpus callosum. Gazzaniga (1972) stated that it is "beyond a shadow of a doubt that it is this brain structure [the corpus callosum] which relates the psychological, conscious experiences of one hemisphere to the other" (p. 316). Thus, the corpus callosum (fibers connecting the two brains) is the structure which enables interaction between the hemispheres such that a third category of hemisphericity can exist.

Gazzaniga (1975) referred to the "extraordinary potentialities" that are available for the field of brain research as it grapples with an understanding of how neurological systems encode psychological information. While these potentialities have not yet been fulfilled, glimpses into the secrets of the brain have been achieved. Indeed, secrets of the past have been sufficiently revealed to enable psychologists and educators to employ the new knowledge in such a way as to facilitate learning. The research makes use of new information to identify hemisphere preferences in life/learning situations. It is based upon knowledge of specialization for specific tasks within each of the hemispheres and the tendency of persons to use their brain hemispheres in specific ways or patterns.

The concept of hemisphericity, then, as used in this study, is the tendency for persons to rely on a particular pattern or strategy in their customary style of perception and expression according to their personal hemisphere preference. Hemisphere preference, in turn, is operationalized to mean the tendency of each individual to select and interpret data and to respond to that data in ways known to be functions of the right hemisphere or of the left hemisphere or of both hemispheres in a mixed mode. The concept of hemisphericity together with the recognized differences in hemisphere organization in normal, healthy adults constitutes the foundation for construction of a test to identify hemisphere preference.

The purpose of the present research was to construct a test that could discriminate among persons on the basis of their way of taking in data from the environment and of responding outwardly to that data in terms of the specialized functions of the right and left hemispheres of the brain. A comprehensive search of the literature failed to identify a test which appropriately met the criteria prescribed for such a test. While Torrance and his colleagues created tests based on hemisphere specialization, Tests "A" and "B," 1978 and Test "C" 1980, Your Style of Learning and Thinking (SOLAT), they used only verbal (words) response items.

Research by Bogen et. al. (1972) expressed major concern for any test of hemisphere preference to provide equal advantage to both sides of the brain through an unbiased presentation of test items and mode of response. These authors stressed the desirability for a test to place equal demands, specifically, on verbal and non-verbal functions.

Thus, an additional purpose of the present research was to construct a test instrument which is balanced in verbal/non-verbal presentation and which requires little more than pointing (a right-brain function) in responding to items. The balanced design favors the right- or left-brain preference equally while providing an option in each instance for an individual to select a response which is judged to be right, left, or mixed in cognitive functioning. In this study however a fourth modality of "bi-modal" was analyzed.

Methodology

The process used in developing the test consisted of (a) the development of criteria for item construction; (b) item selection and pilot testing, (c) reliability studies; and, (d) validity studies. The population consisted of adult learners whether or not they are actively engaged in study programs. Samples taken from the population included educators; professional persons; graduate students; accountants; students majoring in art, civil engineering, and law; and retired persons.

a. Criteria for Item Construction: A clear basis for test construction was derived from the literature via explicit, detailed description of hemisphere specializations. Below are samples of criteria used.

The Right Hemisphere	The Left Hemisphere
-perceives spatial relationsh, concrete images, complex configurations	- perceives words both oral and written, uses words precisely, literally, sequentially
-gathers data through rapid scanning and intuition	- analyzes, names, counts, orders, outlines

b. Item Selection and Pilot Testing: A pool of items was prepared using ordinary life/learning situations. The resulting pool of items was submitted to experts who evaluated the items. These items (43) became the first draft.

Draft One was administered to 62 public school personnel and to 18 graduate students together with SOLAT test. The two tests identified the same trends in hemisphericity in both samples. However, Draft One seemed to provide options which enabled participants to select R-mode responses more frequently than did SOLAT. In addition, Draft One reduced the per cent of undetermined hemisphericity among participants. It was in this analysis that "bi-modal" preference was perceived as a fourth modality/preference.

BEST COPY AVAILABLE

Table 1
Hemisphere Orientation
in Public School Personnel (PSP) and in Graduate Students (GS)

Test	Number	Hemisphere Orientation in percent and number of persons			
		R	L	I	Bi-Modal*
SOLAT	81	22 (18)	20 (16)	43 (35)	15 (12)
HI-RO	81	37 (30)	17 (14)	41 (33)	05 (04)

*Bi-Modal indicates participants who showed greatest strength in two categories equally.

Table 3
Cronbach's Alpha Item Analysis on
Draft One of HI-RO

	N=80 R	N=80 L	N=80 I
Mean	15.7375	12.6250	14.6250
St. Dev.	5.1503	4.3352	5.1024
Alpha	.7253	.6371	0.6994
	.73	.64	.70

Table 2
Pearsonian Point Biserial
Item-Scale Correlation Coefficients Draft One[a] (N=80)

Item	Choice	R	L	I	Item	Choice	R	L	I
1	a	-.21	.26*	-.01	5	a	-.10	.25*	-.11
	b	.33*	-.17	-.20		b	.35*	-.17	-.21
	c	-.09	-.11	.18*		c	-.26	-.09	.34*
2	a	.32	-.13	-.21	6	a	.24	-.05	-.19
	b	-.11	-.31	.37*		b	.15	.23*	-.34
	c	-.07	.41*	-.28		c	-.32	-.12	.42*
3	a	-.14	.24*	-.06	7	a	-.19	.42	-.16
	b	.30*	-.25	-.10	⋮	b	.34*	-.12	-.24
	c	-.15	-.02	.17*	⋮	c	-.21	-.23	.41*
4	a	.19*	-.11	-.10	⋮				
	b	.00	.32*	-.27					
	c	-.23	-.13	.35*	N=32				

[a] Draft One: Selected items from a total of 43. Selection excludes items not retained in the second draft. Responses are keyed to scale.

Table 4
Pearson Correlation Coefficients
Comparing SOLAT and Draft One

		SOLAT R	SOLAT L	SOLAT I
Draft One	R	.5314 (18) P=.012	.0263 (18) P=.459	-.5885 (18) P=.005
	L	-.4034 (18) P=.048	.6483 (18) P=.002	-.1928 (18) P=.222
	I	-.1138 (18) P=.326	-.5187 (18) P=.014	.6189 (18) P=.003

c. Reliability and Validity: Item-scale coefficients of correlation were developed to determine the discrimination power of each item, the extent to which the item was answered in the keyed direction, R, L, or I. This data was used for the retention, revision, or deletion of items in the formulation of a second draft. Formulation of Draft Two completed the pilot study.

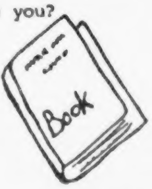
Draft Two was submitted to a panel of judges who analyzed each item on the basis of the criteria for its construction together with the statistical data that had been generated. Table 2 demonstrates point biserial item scale correlation co-efficients on all items to be very discriminating. Cronbach's Alpha shown in Table 3 is .73-R, .64-L, .70-I. Comparison analysis with SOLAT in Table 4 demonstrates great reliability. With great reliability and validity demonstrated, a final draft was developed.

d. Test Instrument: Because the pilot study indicated that the new test can discriminate among persons on the basis of their hemisphericity as operationalized in this study, the items used in the test are of major interest. Sample items, both verbal and graphic, are presented below.

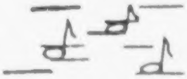
—When I tell a story
  a. I act it out using gestures and motions
  b. I do not act it out using gestures and motions
  c. about half the time I act it out and about half the time do not

—Which is more like you?

(1)



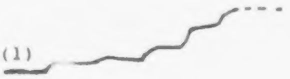
(2)



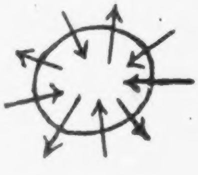
a. (1)
b. (2)
c. (1) and (2) are equally like me

—Which best represents your life?

(1)



(2)



a. (1)
b. (2)
c. (1) and (2) represent my life equally

— a. I prefer problems that can be solved in one way only
  b. I prefer problems that can be solved in more than one way
  c. I have no preference for problems which can be solved in one way only or more than one way

BEST COPY AVAILABLE

Implications for Educational Practice

The final test of HI-RO will be by adult educators. As the test was developed to assist educators readily to discern hemisphere preference among learners, it's use in classrooms, in offices, in planning, in counseling and in other daily practice will need support and implementation. Generally, implementation occurs when the need is shown, the use proven of value, and, the results obviously better. Thus there is another step which must be spoken of briefly in this paper;, i.e. how to use the test and what to do with the results.

The test can be given at the beginning of a semester class, a workshop, a counseling experience, in a staff meeting or planning meeting. It is a speedy exercise when placed along side a needs diagnosis or assessment survey. It is a clever discussion tool in a workshop when discussing brain research. The results can implicitly demonstrate to the educators the type of approach or learning which is taking place, but it explicitly provides the clues to choice of techniques, context of planning, how a group will organize it self, ways to get and hold attention, the nature of perception, the choices to be made by a person or the viability of one learning experience over another.

It took a lengthy period for tests of cognitive style or Locus of Responsibility or needs diagnosis to become a part of everyday educational analysis and it may also be so for this test. However the potentiality for meeting needs, engineering consent, strengthening perception, developing motivation, and immediate use may become the catalyst for speedy application and for continued research into the universe called the hemispheres of the brain.

REFERENCES

Bogen, J. E. The other side of the brain II: An appositional mind. Bulletin of the Los Angeles Neurological Society, 1969, 34, 135-162.

Bogen, J. E., DeZure, M., TenHouten, W. D., & Marsh, J. F. The other side of the brain IV: The A/P ratio. Bulletin of the Los Angeles Neurological Society, 1972, 37, 49-61.

Bradshaw, J. L., Gates, A., & Patterson, K. Hemispheric differences in processing visual patterns. Quarterly Journal of Experimental Psychology, 1976, 28, 667-681.

Cohen, R. A. Conceptual styles, culture conflict, and nonverbal tests of intelligence. American Anthropologist, 1969, 71, 828-856.

Gazzaniga, M. S. One brain--Two minds? American Scientist, 1972, 60, 311-317.

Gazzaniga, M. S. Review of the split brain. UCLA Educator, 1975, 17 (2), 9-12.

Kall, R. A. The battle within your brain. Success Magazine, October 1981, pp. 20-23; 46-49.

Levy, J., & Trevarthen, C. Metacontrol of hemispheric function in human split brain patients. Journal of Experimental Psychology: Human Perception and Performance, 1976, 2, 299-312.

Levy, J., Trevarthen, C., & Sperry, R. W. Perception of bilateral chimeric figures following hemispheric deconnexion. Brain, 1972, 95, 61-78.

Levy-Agresti, J., & Sperry, R. W. Differential perceptual capacities in major and minor hemispheres. Proceedings of the National Academy of Sciences, 1968, 61, 1151.

Nebes, R. D. Dominance of the minor hemisphere in commissurotomized man for the perception of part-whole relationships. In M. Kinsbourne & W. L. Smith (Eds.), Hemispheric disconnection and cerebral function. Springfield, IL: Charles C. Thomas Publisher, 1974.

Sperry, R. W. Lateral specialization of cerebral function in the surgically separated hemispheres. In F. T. McGuigan & R. A. Schoonover (Eds.), The psychophysiology of thinking: Studies of covert processes. New York: Academic Press, 1973.

Torrance, E. P., & Reynolds, C. R. Preliminary norms-technical manual for Your Style of Learning and Thinking, Form C. Athens, GA: Georgia Studies of Creative Behavior, 1980.

Torrance, E. P., Reynolds, C. R., Ball, O. E., & Riegel, T. Revised norms-technical manual for Your Style of Learning and Thinking, Forms A and B. Athens, GA: Georgia Studies of Creative Behavior, 1978.

PERSONALITY TRAITS AND PERCEIVED BENEFIT ASSOCIATED WITH DIFFERENT APPROACHES OF MEDICAL STUDENTS TO SELF-DIRECTED LEARNING PROJECTS

Robert D. Fox and Russell F. West +
Quillen-Dishner College of Medicine
East Tennessee State University

INTRODUCTION

Recently, medical schools have been encouraged to offer undergraduate students and residents more opportunities to design and manage independent, self-directed learning projects so they may become more skillful lifelong learners (1). Fisher (2) asserted that medical students must make a transition from learning which is teacher-directed to learning which is based upon self-direction, particularly when one considers the inevitable educational autonomy characteristic of medical practice. Neame (3) notes that "an undergraduate course of medical studies is inadequate unless, among other things, it is designed to foster an active involvement of the student in his own learning and develop the ability to define structure and take responsibility for it independently of his teachers" (p. 872).

Based primarily on the studies of adult learning and adult education, self-directed learning is defined as organized systematic learning activities which are initiated and conducted by the learner (4). Knowles (5) describes self-directed learning as an unfolding characteristic of adulthood and asserts that by nature self-directed learning is the dominant mode of learning in adulthood. Research in the field of adult education has demonstrated the pervasiveness of self-directed learning projects in the adult population (6). Yet, several questions about independent self-directed learning remain including: Do different types of learners pursue self-directed learning in different ways? Do all who engage in self-directed learning projects benefit equally regardless of their personality or the way self-directed learning projects are conducted?

Apart from the assertions of scholars, little empirical research on self-directed learning in undergraduate medical education has been reported. The purpose of this study was to examine the different ways freshman and sophomore medical students conducted self-directed learning projects, the personality traits associated with these approaches, and the extent to which students reported more or less benefit from self-directed learning experiences, according to both their approach to self-directed learning projects and their personalities. Specific research questions which guided this study were:

1. When given the opportunity to engage in self-directed learning, will students design different types of learning projects?
2. Can differing types of self-directed learning projects be predicted based on the personality traits of students?

+Department of Continuing Medical Education, Quillen-Dishner College of Medicine, East Tennessee State University, P.O. Box 19660A, Johnson City Tennessee 37614.

3. Do students' perceptions of the benefits of self-directed learning vary according to the extent to which their type of self-directed learning is consistent with personality traits most frequently associated with that type?

METHODOLOGY

Learning contracts, formal statements by students of the objectives, learning resources and strategies, evidence of success, and identity of those who judge the quality of evidence, were used to record the self-directed learning projects of 49 freshman and 46 sophomore medical students in an Introduction to Clinical Medicine (ICM) Course. As an approach to facilitating self-directed learning, contract learning was selected because it includes the elements of a self-directed learning project identified by Tough (6) and Knowles (7).

After the self-directed segment of ICM was completed, learning contracts which described students' self-directed learning projects were reviewed by four course faculty who acted as a panel of judges. Each judge assigned discrete values to two separate dimensions of each student's contract. (1) In order to indicate the type of learning resources and strategies students used in their contract, a discrete value of one (field based learning experiences only), two (mixed but primarily field based experiences), three (mixed nearly equally, reading and lecture with field based experiences), four (mixed but primarily reading and lecture), or five (reading and lecture only) was assigned. (2) To indicate who validated the quality of evidence presented in the contract, a discrete value of one (community experts, peers, or other non-course faculty), two (mixed, including both course faculty and other validators) and three (course faculty only) was assigned.

In order for data to be included in the analysis, three of four judges on the panel had to agree on the exact value assigned to both categories. Values assigned to type of learning resources and strategy and type of validators were totalled so that the summary value indicated the extent to which students' approaches to self-directed learning were traditional (scores of two to four) or non-traditional (scores of six to eight). Summary scores of five (mixed) and those with missing values were eliminated so that data on 75 subjects remained; forty-two of the subjects had pursued non-traditional approaches to self-directed learning and thirty-three who had pursued more traditional approaches to self-directed learning.

Using the 14 subscale scores from the Omnibus Personality Inventory and the four subscale scores from the Myers-Briggs Type Indicator as independent variables, discriminant function analysis was conducted to determine if personality traits from these inventories could be used to distinguish between those students who designed non-traditional versus traditional self-directed learning projects. An "F" value of 1.00 was selected as criterion for entry or removal of subscale scores from the discriminant analysis.

Finally, to assess the extent to which students believed they benefited from the self-directed learning experience, responses to three questions from the course evaluation were summed to indicate an overall level of perceived benefit. These questions were: (1) To what extent do you understand the applications of self-directed learning to medical practice? (2) To what extent do you believe this exposure to self-directed learning will help you in your clerkship experiences? (3) To what extent do you believe that this exposure to self-directed learning will help you in your future practice?

Each question was scaled from one to seven so that the theoretical range of values for perceived benefit of self-directed learning was from three to twenty-one. Because responses were skewed toward the positive end of the scale, the empirical range of values was from eight to twenty-one. Consequently, scores of 14 or greater, the median of this empirical range, were considered to indicate high benefit, while scores of 13 or less were categorized as low benefit.

To test the association between perceived benefit from the self-directed learning experience and extent to which students pursued a type of project predicted by personality traits, subjects were divided into two groups. The first group was composed of students whose type of project was consistent with their personality traits according to the discriminant function analysis. The second group was composed of students whose type of contract was not consistent with personality traits most often associated with that type of project. A t-test between means of the summary scores on the three questions from the course evaluation was used to establish if those exhibiting consistency between learning project and personality traits believed that they benefited more from self-directed learning than those whose type of projects were inaccurately predicted.

FINDINGS AND DISCUSSION

The discriminant function analysis revealed that six subscale scores from the Omnibus Personality Inventory and one subscale score from the Myers-Briggs Type Indicator formed a construct which successfully discriminated between students who took traditional versus non-traditional approaches designing self-directed learning projects. As depicted in Table 1, estheticism, religious orientation, autonomy, personal integration, anxiety level, and impulse expression from the Omnibus Personality Inventory, along with introversion/extroversion from the Myers-Briggs, formed a set of weights which, when applied to subscale scores, predicted the approach students took in developing their self-directed learning project. The discriminant function of the construct was statistically significant at $\alpha = .05$ (p. = .009). Table 1 contains the standardized canonical discriminant function coefficients for each subscale. The two columns to the right of the canonical discriminant function coefficients describe the meaning of the coefficients for each group and each subscale. At the bottom of the table, the equivalent "F" value associated with the test of significance is noted. Using the discriminant function, 73.3% of the cases were accurately predicted.

Table 1: Standardized Canonical Discriminant Function Coefficients and Interpretations for Non-Traditional Group

	Standardized Coefficient	Relative Scores of Non-Traditional	Interpretation
Personal Integration	1.61	lower	less intrapersonally oriented
**Anxiety	-1.03	higher	less anxious
Impulse Expression	.90	lower	less impulsive
Autonomy	- .82	higher	more autonomous
Estheticism	- .69	higher	more artistic
Extroversion/Introversion	.53	lower	more oriented toward environment
**Religious Orientation	.47	lower	less critical of religion

Equivalent F value = 2.96* (p. = .009)

*significant at $\alpha = .05$

**These scales are interpreted so that high scores indicate less of the characteristic.

The subscale scores describe the group of students who pursue non-traditional approaches to self-directed learning as less intrapersonally oriented, less anxious, less impulsive, more autonomous, more appreciative of the arts and humanities, more extroverted and less critical of religion. The group of students who pursue more traditional approaches in their learning projects appear to be more intrapersonally oriented, more anxious, more impulsive, less autonomous, less interested in the arts, more introverted and more critical of formal religion.

Because it may be advisable to interpret the individual subscale scores identified in the OPI and the Myers-Briggs Type Indicator as a whole rather than independently [1], the general construct indicated by the collection of discriminating variables may represent the extent to which the students exhibit psychological independence as opposed to psychological dependence upon familiar institutionalized patterns of learning. This label for the construct appears to be consistent both with the discriminating variables and contemporary literature which emphasizes the experiential and active patterns of learning engaged in by independent self-directed learners.

The second analysis was based on the need to explain the differences in students' perceptions of benefits from self-directed learning. It examined the different effects on perceptions of benefits of the self-directed learning activity when students' approach to learning was not consistent with the personality traits most predictive of that approach. Fifty (50) subjects' approaches to self-directed learning were consistent with the personality traits associated with that type of project. Twenty (20) subjects pursued learning projects that were inconsistent with the personality traits associated with that type of project. To determine if the first group perceived greater benefit from the self-directed learning experience, a t-test was applied to mean benefit scores of the two groups. The mean perceived benefit from the self-directed learning experience of the 50 students whose approach to learning was accurately predicted by the personality construct was 16.16. For the 20 students whose approach to the self-directed learning project was not accurately predicted by the personality construct, the mean score for perceived benefit of the experience was 14.35. The application of the t-test of differences in means resulted in a t-value of 2.38, which was significant at $\alpha = .05$. This indicated that learners who approached self-directed learning in a way that was consistent with the personality factors most often associated with that type of project believed that the self-directed learning experience was more beneficial.

In order to describe this relationship more clearly, Table 2 associates those who indicated high benefit (scores of 14 or above) or low benefit (scores of 13 or below) with consistency or inconsistency between the approaches to self-directed learning and other personality constructs. From the table, one notes that of the 50 students whose type of self-directed project was consistent with personality traits, only 12% perceived low benefit from the self-directed learning experience. However, of the group of students whose approach to self-directed learning was inconsistent with the personality traits most commonly associated with that approach, 40% indicated low perceived benefit from the self-directed learning experience.

---

[1] Omnibus Personality Inventory, Technical Manual, 1962, p. 13

Table 2: Association Between Perceived Benefit and Consistency of Mode of Learning with Personality Traits

	High Benefit*	Low Benefit**	Total
Mode of learning consistent with personality traits	88% (N=44)	12% (N=6)	100% (N=50)
Mode of learning inconsistent with personality traits	60% (N=12)	40% (N=8)	100% (N=20)

*High benefit = scores of 14 - 21

**Low benefit = scores of 8 - 13

From the findings of the study, one may conclude that when engaged in self-directed learning projects, medical students with different personality characteristics engage in different modes of learning. Specifically, personality traits which indicate psychological independence are associated with non-traditional approaches to conducting self-directed learning. On the other hand, students who appear to be more dependent on traditional patterns of learning are also more likely to conduct self-directed learning projects which are more comfortable and familiar.

It was reasonable to discover that those who seek autonomy, who are diverse in their orientation, and who are more extroverted are more likely to seek non-traditional modes of learning. It was also reasonable to find that those who were more intrapersonally oriented, more anxious and more introverted, would pursue more familiar, traditional modes of learning. The value of these findings do not lie in their nature but in the empirical verification that, given the opportunity, personality is significantly associated with the mode of learning selected by medical students. In addition, the findings of the study indicate that when one engages in a mode of learning that is inconsistent with personality traits, more often reactions to that learning mode will be more negative. Thus, those engaged in preparing medical students and other professional students to be self-directed lifelong learners as practicing professionals should be aware that (1) all learners may not employ the same mode in conducting self-directed learning activities, (2) different personalities may be best suited to different modes of learning, and (3) when learners engage in a mode of learning which is inconsistent with their personality traits, they may indicate less satisfaction than when the mode of learning is consistent with personality traits.

This study suggests that no single mode or approach to learning is equally suitable for all learners. In fact, understanding which education methods are appropriate depends upon greater understanding of the learner and his orientation to learning. This study also implies that traditional modes of learning may not be suitable for others. Greater success in the application of educational methods to learning problems in professional schools depends upon greater understanding of how the characteristics of learners relate to the success or failure of these methods. This is especially important when attempting to encourage lifelong learning.

REFERENCES

1. Houle, Cyril O. Continuing Learning in the Professions. 1980. Jossey-Bass Publishers, San Francisco.

2. Fisher, Waldo R. "Medical Student Research: A Program of Self Education." Journal of Medical Education. 56:11, November, 1981, 904-908.

3. Neame, R.L.B. and D.A. Powis. "Toward Independent Learning: Curricular Design for Assisting Students to Learn How to Learn." Journal of Medical Education. 56:11, November, 1981, 886-892.

4. Cross, Patricia K. Adults As Learners. Jossey-Bass, San Francisco, 1981.

5. Knowles, Malcolm S. The Adult Learner: A Neglected Species, Second Edition, 1978, Gulf Publishing Company. Houston, Texas.

6. Tough, A. "Major Learning Efforts: Recent Research and Future Directions." Adult Education. 28:4, 1978, 250-263.

7. Knowles, Malcolm S. The Modern Practice of Adult Education. A/P Follett, Chicago. 1980.

Images of Interdependence: Meaning and Movement in Learning/Teaching

Gwyneth Griffith
Centre for Christian Studies, Toronto*

INTRODUCTION

The concept of interdependence is relatively new in educational literature and the study on which this paper is based was an exploratory one. Paul Nash (1973) identified three authority modes in education, affirming the radical mode of interdependence. Pine and Horne(1969), Griffin(1977) and Brundage and MacKeracher(1980) also noted interdependence as an important principle of adult learning, while acknowledging the difficulties in achieving it.

The journey to discover images of interdependence is a shared, creative process, and these images depend on one's own experience, personal, political and educational. One's heart and feet need to be involved as well as one's head, and my own journey towards new understanding and behavior was integral to the study. The focus of the study outlined in this paper is two-fold: an understanding of the meaning of interdependence, in contrast to dependence and independence, and of the movement towards interdependence. Understanding in the study came from both its content and its process.

During the study, three perspectives on interdependence were identified: conservative (as used increasingly in management and international economics), liberal (described in the literature as cooperation for the purpose of self-actualization and personal freedom) and radical, which emerged as the topic of the study. These were linked with political views of adult education (Baum, 1978), modes of inquiry (Sullivan, 1980; Macmurray, 1957 and 1961) and to the authority modes of dependence, independence and interdependence.

METHODOLOGY

The intent of the study was that the methodology be congruent with the phenomenon being studied. I, as researcher participant, strived to be interdependent as I interacted with the participant researchers, myself, other persons, the data and the literature. The data base came from forty-five interviews with twenty-two persons (twenty women, one of whom was the co-ordinator of the program, and two men) who had experienced the Core program at the Centre for Christian Studies** and were identified as having some understanding of and as trying to practise interdependence. In the first interview, participants were asked to reflect, through response to questions, on their experience and understanding, using the sub-language of authority modes, and to share verbal images of interdependence. A second interview with each was a dialogical exploration of issues and themes raised in the first interview, at the end of which participants were asked to create a symbol of the meaning of interdependence for them then. During the whole process of analysis, I considered the participants as co-researchers, consulting with them at various stages.

---

*Centre for Christian Studies, 77 Charles St. W., Toronto, Ontario, M5S 1K5

**The Centre is an educational institution co-sponsored by the Anglican and United Churches of Canada, concerned with preparation for ministry, both professional and lay. "Core" is one of three integrated parts of the Diploma program in which participants determine their own learning goals (within guidelines), plan curriculum and facilitate sessions. Participants are encouraged to reflect on experience, individually and in groups, using both concepts and symbols/images.

As the topic of the research emerged, so did the nature of the research process evolve, although there was discipline and intentionality at each stage. The dialectical, hermeneutical method was both historical and imaginative (Jay, 1973, Darroch and Silvers, 1980), with knowledge being co-created.

DISCOVERIES

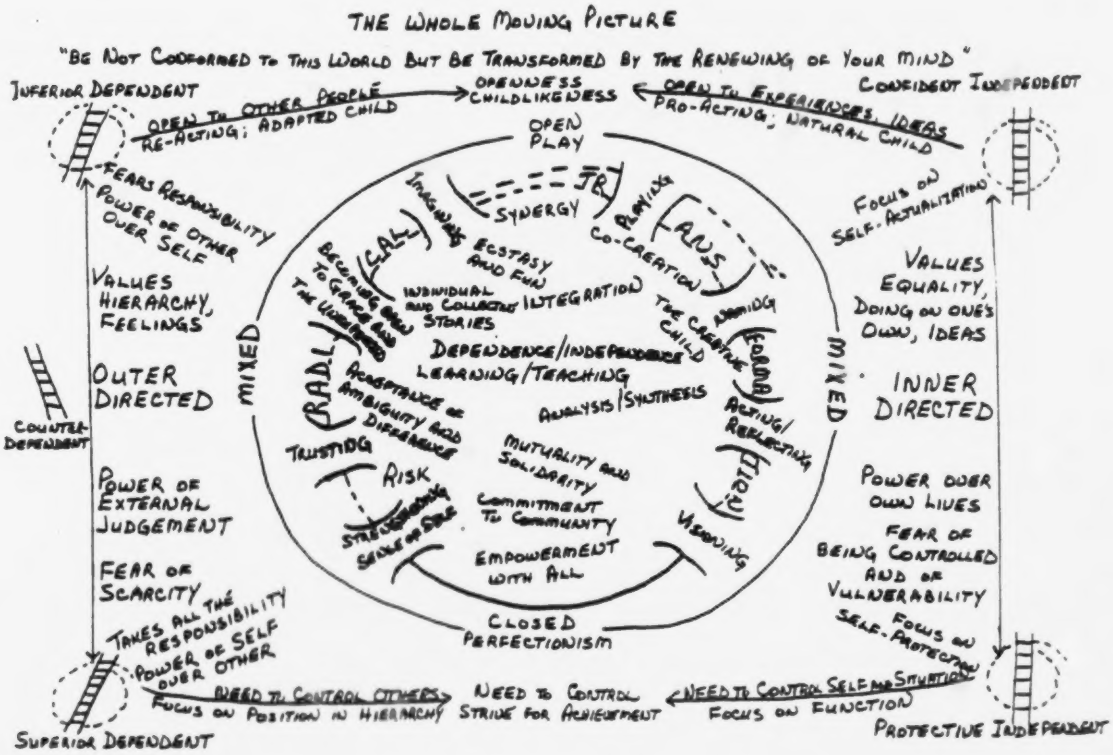
Participants were linked with five authority modes related to dependence and independence, a mix of these two modes, and readiness for interdependence. Five modes were necessary to incorporate both the participants' self-understanding of the relationship of their experience to the modes and my own growing understanding of the meaning of the modes. The authority modes of participants related primarily to learning experiences within their families. Participants identified many components of the Core program as significant in the learning of interdependence. Their primary authority modes affected the meaning of the Core experience for them as well as the way they responded to it.

Those who tended towards the _dependent_ mode came from families which valued status, security (fearing scarcity), family, serving others and social graces. They did well in previous school experiences and avoided both conflict and expression of anger. They had difficulty with most Core processes, fearing feedback (both positive and critical), unclear expectations and breaking rules. They needed to know, to be right and to plan ahead. They were in awe of the teacher, who was seen as set apart, and were passive learners. Those who tended to the _independent_ mode came from families which valued objectivity, rationality and achievement and who were comfortable with conflict. In Core they had no difficulty stating their learning goals and they felt held back by others. Feedback was easier for them to give than receive and they had difficulty expressing their vulnerability. They perceived learning as information assimilation. Those in the _mixed_ dependent-independent mode focused on providing _for_ others and on understanding feelings. They struggled with perfectionism and learned from modelling. They had difficulty in asking for feedback and in challenging the "teacher", who threatened them.

Some participants had been ready for interdependence when they began Core. The _independent-ready_ had learned to analyse, to explain reasons and to be open to criticism. They could take responsibility for themselves but were aware of others' needs. They enjoyed challenging teachers and perceived learning as a solo activity. Feedback was highly valued and, while they shared thoughts easily, sharing of feelings was difficult. The _mixed-ready_ had been encouraged to be their own persons and to make their own decisions within concern for others. Relationships with teachers, who were seen as models, was important. Wholeness and integration were valued, as well as the naming of feelings, concepts and skills. All participants, as they shared their perceptions of interdependence, demonstrated that one's image of interdependence is influenced by one's original authority mode, regardless of how interdependent one has become.

THE PICTURE

A picture of the relationship of dependence, independence and interdependence has emerged. Images and symbols are essential to grasp the meaning of interdependence, and the symbols of the ladder (for dependence and independence) and the open circle (for interdependence) are used (Fox, 1979). In this picture of interdependence and its context in our culture, the component parts grow and change within themselves and in relation to one another, as one's experience with them changes.


THE WHOLE MOVING PICTURE
"BE NOT CONFORMED TO THIS WORLD BUT BE TRANSFORMED BY THE RENEWING OF YOUR MIND"
INFERIOR DEPENDENT
OPEN TO OTHER PEOPLE
RE-ACTING; ADAPTED CHILD
OPENNESS
CHILDLIKENESS
OPEN TO EXPERIENCES, IDEAS
PRO-ACTING; NATURAL CHILD
CONFIDENT INDEPENDENT
OPEN
PLAY
FEARS RESPONSIBILITY
POWER OF OTHER OVER SELF
VALUES HIERARCHY, FEELINGS
OUTER DIRECTED
COUNTER-DEPENDENT
POWER OF EXTERNAL JUDGEMENT
FEAR OF SCARCITY
TAKES ALL THE RESPONSIBILITY
POWER OF SELF OVER OTHER
SUPERIOR DEPENDENT
NEED TO CONTROL OTHERS
FOCUS ON POSITION IN HIERARCHY
NEED TO CONTROL
STRIVE FOR ACHIEVEMENT
NEED TO CONTROL SELF AND SITUATION
FOCUS ON FUNCTION
PROTECTIVE INDEPENDENT
FOCUS ON SELF-ACTUALIZATION
VALUES EQUALITY, DOING ON ONE'S OWN, IDEAS
INNER DIRECTED
POWER OVER OWN LIVES
FEAR OF BEING CONTROLLED AND OF VULNERABILITY
FOCUS ON SELF-PROTECTION
MIXED
MIXED
CLOSED
PERFECTIONISM
TR
SYNERGY
IMAGINING
PLAYING
ANS
CO-CREATION
CAL
ECSTASY AND FUN
BECOMING OPEN TO GRACE AND THE WONDERFUL
INDIVIDUAL AND COLLECTIVE STORIES
INTEGRATION
THE CREATIVE CHILD
NAMING
FORMA
RAD.I
DEPENDENCE/INDEPENDENCE
LEARNING/TEACHING
ANALYSIS/SYNTHESIS
ACCEPTANCE OF AMBIGUITY AND DIFFERENCE
ACTING/REFLECTING
TION
TRUSTING
RISK
MUTUALITY AND SOLIDARITY
COMMITMENT TO COMMUNITY
STRENGTHENING SENSE OF SELF
EMPOWERMENT WITH ALL
VISIONING

The Ladders

The world of the ladder is our present society, described as independent in its rhetoric and dependent in its practice. The four ladders developed in this study represent two sub-modes in each of the dependent and independent modes. These ladders have both unique and shared characteristics.

BEST COPY AVAILABLE

Dependent mode. These ladders (or those who tend to this mode) are strongly affected by the judgement of others and are guided by criteria external to themselves. They value hierarchy and the "feeling" component of life. The "superior dependent" needs power over others to enhance the sense of self and wants to take all the responsibility in relation to those seen as lower on the hierarchy. The "inferior dependent" needs others to have power over the self and fears taking any responsibility, including for oneself.

Independent mode. These ladders seek power over their own lives and value equality, "doing" and "thinking", and being on one's own, free from others. The "confident independent" seeks to actualize the self and the "protective independent" seeks to protect the self.

The superior dependent and protective independent ladders, when mixed, tend towards perfectionism and are more closed to interdependence. The inferior dependent and confident independent, when mixed, tend towards play and are more open to interdependence.

Each individual is a mix of all ladders, although one or two usually predominate. The mixing process is essential for movement towards interdependence, each person needing to pick up open characteristics of the other primary mode and to let go of closed characteristics of their own primary mode. One's way of expressing and experiencing interdependence is affected by one's original authority mode.

Moving Towards the Open Circle

Moving towards interdependence requires radical transformation in seeing and being in the world. This transformation may come suddenly or gradually and is never fully accomplished. Those who value radical interdependence are caught in the dialectic of the reality of the world of the ladder and the vision of the open circle. One is, however, able to be intentional about learning to live interdependently, and eight dynamics are identified in the picture which interact and which enable one to move. Two of these provide the affirmation and challenge necessary for the others: strengthening sense of self (knowing and accepting oneself which means one can be open and invest in others confidently), and the vision of freedom and justice for all within mutual responsibility, which offers the hope that empowers the struggle towards interdependence.

The Open Circle

In the open circle what have been experienced as opposites in the dualistic world of the ladder are now experienced together, both true, but now in a dialectic, each addressed by the other, both changed and changing in the process. Of fourteen components identified in the picture, two illustrate this dialectic. One is dependence/independence where one rejoices in needing and being needed by others and in being able to choose, act and be on one's own. The second is learning/teaching where both processes are transformed and become one which is more than either or both. Through our own learning we facilitate the learning of others and we learn through facilitating the learning of others. Shared action/reflection is effective both in the learning of interdependence and in interdependent learning.

AUTHORITY MODES IN EDUCATION

In the dependent mode, the focus is on transmission of knowledge which is "owned" by the teacher. Learners are passive receivers and the teacher is the expert. What is learned can be measured, usually by the teacher, indicated by grades. In the independent mode, the focus is on self-directed learning, with the teacher as resource. Knowledge is perceived as a commodity to be accumulated by and for the learner. In the interdependent mode, the focus is on self-directed learning in community, with the teacher as learner. Learners are responsible for enabling their own learning and the learning of others, including that of the "teacher". Knowledge is co-created and is historical and imaginative. Learning is both integrated and fun!

IMPLICATIONS

In practice, the interdependent learning approach can be especially effective in adult education settings where the focus is on learning how to enable others to learn. It is, however, effective in any setting where adult learners wish to be actively involved in the learning process. The interdependent approach also has implications for administration as one seeks to move from a hierarchical structure to a more collective model. Further research is needed to clarify the different meanings of interdependence (especially that which is defined in this study as conservative and liberal) as related to power, values, and the relationship of the individual to society. Study is also needed to explore the nature of the transformation process and of facilitating learning interdependently, depending on the authority mode in which the learner and facilitator has begun. Other questions relate to the relationship of authority modes to cognitive styles (Witkin, 1974), representational systems (Bandler and Grinder, 1975) and learning styles (Kolb and Fry, 1978). There are also implications in this study for education of children and for the understanding of the Canadian context of education. The links between feminist analysis and interdependence appear strong and more study is needed to examine further the potential for interdependence in both men and women.

SUMMARY

One's images of interdependence are coloured by the primary authority mode of dependence and/or independence within which one still tends to function. If one values radical interdependence, one needs to let go of aspects of both dependence and independence which mitigate against interdependence and develop further aspects of both which enable interdependence. An interdependent stance is a stance of learning in community and for the sake of both the self and the community.

REFERENCES

Bandler, Richard and Grinder, John. The Structure of Magic: A book about language and therapy. 2 vols. Palo Alto, Calif.: Science and Behavior Books, 1975.

Baum, Gregory. "Adult Education as a Political Enterprise." Learning 2 (Fall/Winter, 1979):9.

Brundage, Donald H. and MacKeracher, Dorothy. Adult Learning Principles and Their Application to Program Planning. Toronto, Ontario: Ministry of Education, 1980.

Darroch, Vivian, and Silvers, Ronald J. Biography and Discourse: The Knowledge of Interpretive Inquiry. Toronto: Ontario Institute for Studies in Education, 1980.

Fox, Matthew. A Spirituality Named Compassion and the Healing of the Global Village, Humpty Dumpty and Us. Minneapolis, Minn.: Winston Press, 1979.

Griffin, Virginia R. "Principles of Adult Learning." OISE, Toronto, 1977. (Mimeographed.)

Jay, Martin. The Dialectical Imagination: A History of the Frankfurt School and the Institute for Social Research, 1933-1950. Boston: Little, Brown & Co., 1973.

Kolb, David A., and Fry, Ronald. "Towards an Applied Theory of Experiential Learning". In Theories of Group Processes. pp. 33-57. Edited by Cary Cooper. New York: John Wiley & Sons, 1978.

Macmurray, John. The Self as Agent. London: Faber and Faber, 1957.

_________. Persons in Relation. London: Faber and Faber, 1961.

Nash, Paul. "Towards a Radical View of Authority Relationships in Education." In Education and Reconstruction: Promise and Challenge. pp. 342-61. Edited by N. Shimahara. Columbus, Ohio: Charles E. Merrill, 1973.

Pine, Gerald J., and Horne, Peter J. "Principles and Conditions for Learning in Adult Education." Adult Leadership 18 (October, 1969): 108.

Sullivan, Edmund. Psychology as an Interpretive Activity. Toronto: OISE Press, 1980.

Witkin, Herman. "Cognitive Style and the Teaching/Learning Process." Washington, D.C.: American Educational Research Association, 1974 Annual Meeting. (Phonotape).

Democratization of the Knowledge Production in Adult Education - Some Observations from the Swedish Experiment

Robert Höghielm
Stockholm Institute of Education

BACKGROUND

The ambition to try to decentralize the educational sector in Sweden can be regarded as an expression of a wish to broaden and deepen democracy. On the other hand, it can also be conceived as a result of a change from more direct governing of education via goals and regulations to more indirect methods. The change means that normative control replaces more direct and visible rules, i.e., formal control. When normative control is applied, it permits a certain amount of leeway for local divergencies which appear preferable, if they are processed in the right direction.

To encourage local innovations, a number of measures have been carried out to implement school reforms. A central bureaucratic organization, in Sweden the Swedish National Board of Education (NBE), has taken a very active role in ensuring that local innovations are be related to new curricula and other school reforms, while local initiatives have been more unusual (see, e.g., Dahllöf, 1967, 1974).

Orlich (1979) in a negatively critical article, attacks the centrally conducted educational R & D in the United States. He also claims that most projects at local schools have a very short-range effect for the school. Fullan & Pomfret (1977) in a review of research on curriculum and instruction implementation state that there are a great number of factors which have significant importance when implementing a reform, such as lack of teacher involvement in change decisions, inadequate understanding on the part of planners of the complexities and difficulties of implementation, large-scale attempts at bringing about change in unrealistic short-time frames etc. One of Fullan & Pomfret's conclusions is that every innovation demands organizational changes. A general conclusion from their review is that the frame factors (= factors outside the educational situation) have a significant impact on how an innovation can be assimilated. This conclusion agrees with other types of research e.g., Entwistle (1977); Eggelston (1977); Lundgren (1977) who have discussed how factors outside the educational situation govern and constrain it. This author (Höghielm, 1980) claims that much of the bad instruction noticed in Swedish municipal adult education can be explained as the result of the instruction being a victim of frame factors according to official political intentions.

General characteristics of Swedish local R & D in adult education

A Bill passed in 1967 (Proposition 1967:85) made it possible to organize a new form of adult education in Sweden: municipal adult education. The Bill also covered other types of adult education in the country: study circles, folk high schools and labour market training. The general goal for adult education should be service-political (that of supplying society/the labour market with well-educated individuals and to satisfy individual demands of adult education). After pressure from the big trade unions, a new Bill in 1970 (Proposition 1970:35) gave more emphasis to the idea of equality. Adult education received an ideological motivation and was related to society's general goals for all education, i.e., that education is an important instrument of social change. It is easy to notice how the State successively, via various Bills, supported adult education during a period of nine years. Many citizens came to regard municipal adult education as their "second chance". The result was that high hopes were pinned on this nascent organization. As time went on, comparisions were often made and still are made with activities in study circles and folk high schools.

In Sweden there is a very close connection of the authority (NBE) which distributes research money and the control of the process of policy-making. NBE had had some experience of local R & D which had started in the middle of the sixties to back up the reforms in the Swedish compulsory school. The NBE strategy had been to contact a number of communities and offer them extra money to be used for developmental research activities in daily school work. The various communities were also obliged to support the activities by means of tax money. The state, in this case the NBE, took the view that these local R & D projects guaranteed that the new compulsory school would function more successfully. The R & D work was normally financed fifty-fifty by the NBE and the communities in question. The conditions were that the money should be spent on solving problems considered particularly important by the local school authorities. The activities were labelled research projects and the NBE's financial support time was limited. That particular type of activity is referred to in this article as "local R & D".

In 1975 NBE decided to start local R & D in the area of adult education using the same model as for youth education. At this time a number of negative reports had emerged, indicating that municipal adult education recruited the "wrong type" of participants, that it had a large drop-out rate, etc. The general idea was to try to transmit knowledge from study circle organizations and folk high schools into municipal adult education. The two first mentioned have a long tradition from the begining of this century.

The local R & D projects were first located in two different regions. After this start during the last five years, four other local R & D areas have been designated. Activities in each local R & D organization were guided by a change agent. But certain types of decisions take place on a central level in accordance with the local level acts.

All local R & D work can be viewed as an extension of everyday educational work. Those who work in this connection, instructors, etc., solve various problems when they occur and mostly do not percieve them as R & D work. This is a local point of view and the significance of this activity is that solving pedagogical situations is a natural part of education. In a way, the central view can be regarded as the antithesis of local activity. What characterizes the central level is that it tries to regulate R & D by defining varying tasks and economic conditions for certain types of requested work. Consequently, centrally initiated R & D is often liable to be regarded as artificial at the local level. By providing money and resources for local R & D in A.E., it was believed that this type of problems could be avoided and instead mean increased knowledge production in the field of A.E.

THEORETICAL CONSIDERATIONS

Traditionally the primary purpose of evaluation has been to provide decision makers with information about the effectiveness of some program, or procedure. Despite differences in the conceptual frameworks used by practitioners, there has been basic agreement about the decision-making role of evaluation. There are many proponents of this point of view, see e.g. Stufflebeam et al (1971). Other well-known educational evaluators e.g. Stake (1967) and Alkin (1969), have conceptualized and partitioned the process of evaluation in other ways, but generally agreed on the decision-oriented purpose of evaluation. Evaluation models can be divided into two general types: Models characterized by production thinking and intuitive models. Both categories can be divided into a number of subcategories and ways see e.g. House (1978). However, if we take P.L. Stufflebeam and R.E. Stake as examples then the former belongs to the production category and the latter to the intuitive category. To these two a third neglected category should be added, viz/models which take as their starting point a number of pedagogical theories. Different theories can yield contributions to the process of evaluation. The structural conditions of society imply constraints on the educational process as regards both content and shape and also have an impact on what happens down to the levels of instruction. The theory or theories which the evaluator uses can be developed or changed during the process of evaluation. The attempt can be characterized as theory-generating see e.g. Glaser & Strass (1967).This approach means to the evaluator that he or she starts with a theoretical framework which is rather rough.

Most of the productive-oriented and the intuitive models in use are aimed at trying to discover technical solutions of problems which have been defined by decision makers or interestgroups. Often taking an uncritical acception of presented problems the evaluator contributes to give displayed solutions a scientific status. However with an evaluation which is "pedagogical-theory oriented" the main task will be to describe and explain what happens e.g. when using educational programs. Consequently an important part in this type of evaluation will be to elucidate conditions, procedures and results including technical analyses. This theoretical standpoint stresses that the evaluation of all types of educational programs must be considered in its cultural and political context. In fact this statement can only be viewed as a development from old ideas. Etzioni (1960) e.g. emphasized the interrelations within an organization and its interface between the agency and its environment in a broad sense. But the necessary connection: environment equal to society's norms and values was never made. The following figure illustrates our conclusions and also gives the broad theoretical framework necessary for the evaluation of educational programmes.

Society's norms and values	→	Transformed in a political apparatus resulting in decisions	→	Political decisions transformed into programmes, administrative systems and judicial systems

When trying to explain how programmes govern, administrative systems constrain and judicial systems regulate the process of instruction which is also swayed by psychological factors of the actors, it is necessary to use different theoretical approaches. Consequently one must also be allowed to use different techniques as far as the economical resources permit.

In this article the third category of models will be referred to as the eclectic model. The present study has been guided by such a model.

THE EMPERICAL STUDY

Areas of interest

As already mentioned there are six local R & D areas in A.E. which have activities supported by NBE. Together they cover 21 communities. (In Sweden there are at present 277 communities.) During the period 1975-1980 roughly 8 million crowns ($ 1,1 million) have been spent on different A.E. developmental projects in the communities.

The purpose of this study was to map and describe the following problems:

1 How is local R & D initiated in the field of A.E?
2 How has local R & D been carried out - and why?
3 Which types of problem have been of interest - and why?
4 Can local R & D be considered as a form of in-service training?
5 Has local R & D increased cooperation between different organizers of A.E.?

When considering the different providers in A.E. and at the same time the State (the central level), which maintains that it is of utmost importance that these organizations should cooperate and exchange knowledge about A.E. it is reasonable to expect that on the local level one will fairly soon run into trouble. (See e.g. Proposition 1980/81:107.)

In the present study questionniares and interviews were used to cover the following items:

1 Goal questions about A.E
2 Effects or results with A.E.
3 Views about R & D work
4 Aims of specific local R & D projects
5 Effects of specific local R & D projects both from an administrative and a pedagogical point of view
6 Questions about future R & D activities.

During the period 115 different projects have been finished. Each project leader received a questionnaire and answered it. Furthermore, all local boards (or correspondingly) in each community have been interviewed (51 individuals). Of these 30 per cent were local politicians. On the central level 9 "key persons" have been interviewed. Finally all change agents who have been in charge of the local R & D in the different communities have been interviewed, altogether 14 persons. The last figure indicates that the number of communities belonging to a special R & D area have varied. As already mentioned, 21 communities were of immediate interest. All official and unofficial documents (from 1973-81) at the NBE concerning local R & D in the field of A.E. were also "scrutinized".

FINDINGS

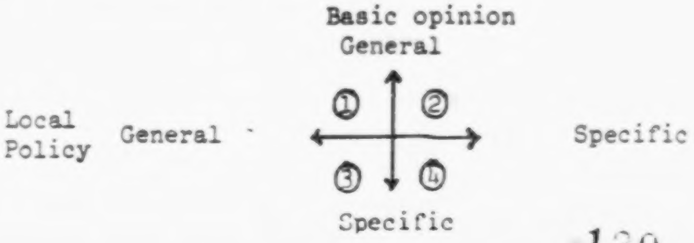
Official documents

The first official objectives for local R & D in A.E. were discussed in a NBE memo from 1973. There it was outlined the necessity of stimulating adult education in a way that the result would be "general acitivty, express special problems, provide practical solutions of discovered problems". The memo also emphasizes that."...*principals, instructors and participants who know the problems must be given the possibility to initiate different projects"*. But this statement is mollified when discussing programs of adult education revealing an urge from the NBE to test and gather information about new programs. The NBE wants to use local R & D as an opportunity to get such information. Three types of objectives emerges viz. *the local objective* directed towards solving local, personal and material conditions, *the central objective* directed towards general phenomena of A.E. and finally *to try new solutions outside the official framework*. There are also another objectives but these are not so explicitly expressed: *the necessity that all the different providers of adult education should cooperate as far as possible*. This objective was most often expressed orally and revealed in the interviews. However the analyses of all official and unofficial documents indicated that NBE in practice had no strategy in its relations to the local change agents responsible for the developmental work.

Interviews

Each interview was tape-recorded and typed out and the answers interpretated. The results of the interviews which were carried out on the local level can be presented with the aid of the following model:

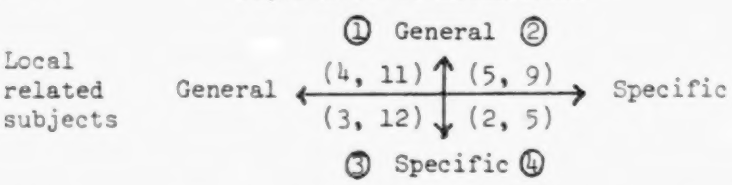
Figure 1



The vertical axis represents the interviewee's basic opinion in more general questions e.g. goals for developmental work in the field of A.E. The horizontal axis shows opinion concerning local policy i.e. questions which are more limited and local, e.g. target groups, needs, working together. The diagram can be viewed as a coordinate system in which one can plot the interviewee's answers. An opinion such as: "Anybody can participate in A.E. and study whatever they prefer", is referred to quadrant 1, while the opinion: "Primanily short educated must be recruited by adjusting subjects of interest to local conditions" belongs to quadrant 4. The other two quadrants can be said to represent opinions which are in between these two extremes.

All interviewes were asked to state the most important objective of A.E. in Sweden. Using the model presented above an evaluation of the interviewees' responses was carried out concerning objectives for Swedish A.E. and which target group of adults must be recruited. The results indicated that most members of the boards for local R & D and the majority of the change agents preferred to state that one must have a specific opinion about the objectives of A.E. and also which group of adults should be recruited. However, concerning the question of objectives for local A.E. and whether subjects of interest should be related to local conditions, there were divergencies in all directions. The findings can be summarized in the following figure.

Figure 2



Encircled numbers refer to the "four quadrants" and the figures in parenthesis relate to number of change agents and members of the boards for local R & D in that order. The results were slightly different when dealing with opinions of what should characterize local R & D and local coordination between local representatives of the different providers of A.E.

Obviously the interviewees had very various opinions about how local policy should be related to more broad questions such as official goals of A.E. The results clearly reflect that no policy had been worked out for solving questions of priority on the local level in relation to the central level. This was also confirmed by the interviews carried out at the central level. Furthermore, individuals on the local level generally complained about restrictions imposed by the central level on the type of activities they were supposed to carry out. In these cases the restrictions were usually referred to official regulations of the different types of A.E. At the local level one was more ready to test the "borderlines".

A central position distant from the everyday educational activities terminated in a more restrictive point of view concerning what type of problems a local R & D project should penetrate. These findings were also reflected by the type of projects carried out.

Type of projects

When analyzing the local R & D projects in A.E., the following figure can guide us.

Figure 3

		CONTENT	
		Instrumental aspect	Ideological aspect
INSTRUMENTS OF CONTROL	Formal control	A	B
	Normative control	C	D

The figure starts form two ends - the control aspect and the content aspect. The latter refers to the type of issues chosen for developmental activities. In this context the figure is meant to be multi-dimensional and should be regarded as a form of guidance when comparing different interests at local and central levels. The four types can be characterized as follows:

A = Purely subject-item-oriented activities in accordance with what can be permitted from official regulations. This category also includes activities concerning textbooks, medias and plain "mapping" studies.

B = Activities organized starting from the subject item but generated toward more general principles such as political and social awareness but in the context of official regulations.

C = Here the training and reinforcement of an individual's social resources are the main goal and are executed within a specific subject but where the system's limits can be tested. This category includes different new ways of instruction.

D = Activities where the orientation towards a specific subject is not particularly strong. Instead the activities are centered around, say the participants' everyday lives. This category also covers activities aimed at recruiting participants or changing local political decisions.

The analyses covered 66 projects which during the evaluation period had terminated in final written reports or memos. 34 projects were classified as category A, 8 as category B, 23 as category C and finally only one project as category D.

Obviously category A, i.e. project activities which are within the official framework of A.E., is most frequent. The results can also be interpretated as a shortage of innovations. But projects of this type can be expected, because they reflect all these minor problems instructors are always confronted by. Probably they also serve as in-service training. Category C is more interesting from an innovative aspect, because it comprises projects which have covered different methodological aspects. These often meant a challenge against official framework. Category B and D are more special because they enclose the ideological aspect. Most of the projects from popular education are found in this category but it would have been more desirable if more had been found, especially when considering the general objectives of A.E. Finally only one project could be refered to as category D. Briefly the project, carried out in a study circle, dealt with environment at a place of work starting as a course in photography. The course resulted in changes at the place of work where most of the participants were employed. The idea also spread to other places of work in the region.

Project leaders' opinions

The small amount of "innovational-thinking" which reflects the majority of the projects could be interpretated, if compared with responses from a qz given to the project leaders, as a result of too much eagerness to try to keep within official regulations etc. Proposals from project leaders which meant "crossing" the border-line of official regulations for A.E. were always stopped by the change agents following directions from NBE. The above mentioned qz which the project leaders answered also showed that the majority of the project leaders did not think that the project had affected them in a considerable way such as change of methods of instruction etc. However, they thought that the project had had a general stimulating effect.

Concluding remarks

The results indicated that NBE had not had any general strategy of how to handle local R & D, neither had projects been permitted which would have "threaten" the borderlines of the official framework. NBE however frequently interfered the local activities resulting into an uncertainty on the local decision level. Further on there had not been any cooperation between the different providers of A.E. only in exceptional cases. The following six points summarize these difficulties:

1. Obstacles in the shape of different financial support systems, e.g. instructors from different providers of A.E. are paid differently.
2. Different providers of A.E. make different formal stipulations.
3. Anxiety resulted from the possibility of one's own profile being reduced by cooperation with other providers of A.E.
4. Different types of contract concerning local conditions which made it impossible to let other providers of A.E. use facilities.
5. Narrow interpretations of governmental subsidies.
6. All project proposals were stopped if they meant exceeding the regular financial framework.

Cooperation was only successful when the problems or subjects chosen had a general status, e.g. projects which tried to cope with adults' diffidence formulating their own opinions in the instruction situation or different types of project dealing with handicap questions. However, all individuals who were directly involved in projects received good in-service training. The experience from the experiment of providing money for local R & D in A.E. has not yet been used in a broader sense i.e. changing programs in the field of A.E. However, the results have had an impact on discussions of how to handle future development work in A.E. Suggestions aimed at coordinating this type of activity by the body of providers of municipal adult education have not found any support in this evaluation. Istead if developmental work in A.E. is to be coordinated, there must be a neutral organization where the four main providers of A.E. can meet, e.g. on the regional level, without detailed interference from NBE.

If society wishes to increase the democratization production in A.E., it is obvious that the same society must cope with its segmented way of organizing A.E. From various sections of society, various types of A.E. have emerged which have resulted into specific and different frameworks. This has made it very difficult for the various providers of A.E. to co-operate and also to interchange knowledge. However, our results indicated that these problems were greatest on the central level compared to the local level, where frequent attempts to ease these difficulties were reported. The state's (NBE's) excessive eagerness to try to regulate activities and guided by various interest groups often made this endeavor impossible. These findings must be added to our theoretical discussions and can be viewed as a result of using an eclectic evaluation approach.

REFERENCES

Alkin, M C (1969). Evaluation theory development. Evaluation Comment, 2(1), 2-7.

Dahllöf, U (1967). Skoldifferentiering och Undervisningsförlopp (School Differentiation and Teaching Process). In Swedish only.

Dahllöf, U (1974). Trends in Process-related Research on Curriculum and Teaching at Different Problem Levels in Educational Sciences. Scandinavian Journal of Educational Research, 18, 55-77.

Eggelston, J (1977). The Sociology of the School Curriculum. London. Henley and Bostons: Routledge & Kegan Paul.

Entwistle, H (1977). Changing Approaches to Research into Personality and Learning. (Dep. of Ed. Research, Univ. of Lancester, England) Inst. of Ed., Univ. of Gothenburg, No 59. Investigations into the Learning and Teaching of Basic concepts in Economics (3).

Etzioni, A (1960). Two Approaches to Organizational Analysis: A Critique and a Suggestion. Administrative Science Quarterly, 5, 257-278.

Fullan, M & Pomfret, A (1977). Research on Curriculum and Instruction Implementation. Review of Educational Research. Winter, Vol 47, No 1, pp 335-397.

Glaser, B G & Strauss, A L (1967). The Discovery of Gruounded Theory: Strategics for Qualitative Research. Chicago: Aldine Publishing Company.

House, E (1978). Assumptions Underlying Evaluation Models. Educational Researcher 7(3), 4-12.

Höghielm, R (1980). The Municipal Adult Education Teaching Process in the Context of Allocation Policy, pp 131-169 in Höghielm, R & Rubenson, K. Adult Education for Social Change. Research on the Swedish Allocation Policy. Stockholm CWK Gleerup. Stockholm Inst. of Ed. Dep. of Ed. Research. Studies in Education and Psychology, 8. Also available in ERIC system: ED 215 091.

Lundgren, U (1977). Model Analysis of Pedagogical Processes. Studies in Curriculum Theory and Cultural Reproduction/2. Stockholm Inst. of Ed. Dep. of Ed. Research. Lund: CWK Gleerup.

Orlich, D (1979). Federal Educational Policy: The Paradox of Innovation and Centralization. Educational Researcher, July-August, Vol 8, No 7, pp 4-9.

Proposition 1967:85. Angående vissa åtgärder inom vuxenutbildningens område m m.

Proposition 1970:35. Angående ökat stöd till vuxenutbildningen.

Proposition 1980/81:107. Regeringens prop. om den statliga skoladministrationen m m.

Stake, R E (1967). The Countenance of Educational Evaluation. Teachers College Record, 68, 523-540.

Stufflebeam, D L et al (1971). Educational Evaluation and Decision Making, Itasca, III, Peacock.

Une approche évaluative andragogique

Marthe Hurteau
Professeur à l'Ecole de psycho-éducation, Université de Montréal, avec la collaboration de monsieur Germain Lalonde, responsable du certificat de Relations Industrielles, Faculté de l'éducation permanente, Université de Montréal

Cadre de référence

La faculté de l'éducation permanente (F.E.P.), de l'Université de Montréal se donne comme double mission de démocratiser l'éducation des adultes en établissant des critères d'admission plus souples que ceux du secteur régulier de l'Université, ce qui en facilite l'accès par le fait même; enfin, de répondre aux besoins particuliers de sa clientèle, cette dernière oeuvrant en majorité dans un domaine professionnel quelconque et étant en quête d'un perfectionnement en cours d'emploi, en lui assurant des contenus de cours appropriés et une pédagogie andragogique.

La faculté offre une trentaine de certificats dans diverses disciplines, dont celui de Relations Industrielles, qui fait le sujet de la présente recherche. Une récente étude fut effectuée sur la clientèle du certificat. De cette dernière peut être découlée de l'information pertinente concernant les moyens que la F.E.P. utilise pour rencontrer ses objectifs d'accessibilité et de réponse à des besoins spécifiques. Diverses analyses furent effectuées, dont la mise en relation entre le statut de l'étudiant (s'il gradue du certificat ou s'il abandonne ses études) et son niveau de scolarité (c.f. tableau I), son sexe (c.f. tableau II) ainsi que son expérience professionnelle (c.f. tableau III).

TABLEAU I

niveau de scolarité / statut	1	2	3	4	Total
diplôme	293	322	172	79	866
abandonne	371	277	210	63	921
total	664	599	382	142	1787*

* exclusion de la clientèle active
ou:
1 = études collégiales non complétées
2 = études collégiales complétées
3 = bacc. (licence) universitaire et plus
4 = études collégiales non complétées et un diplôme dans un autre certificat universitaire

TABLEAU II

sexe statut	femme	homme	Total
diplôme	293	573	866
abandon	363	558	921
total	656	1132	1787

TABLEAU III

expérience professionnelle statut	1	2	3	4	5	Total
diplôme	96	86	126	64	35	405
abandon	92	91	179	64	20	446
total	188	177	305	126	55	851*

* exclusion de la clientèle active ainsi que de certaines catégories non pertinentes (ex: autre...)

ou:
1 = domaine des relations industrielles
2 = cadre supérieur ou inférier
3 = secrétaire, commis ou équivalent
4 = enseignant
5 = infirmière

Ces liens furent effectivement confirmés par des tests du chi-carré ($\alpha \leq .01$) nous dressant ainsi un "portrait-type" de l'étudiant qui abandonne en général, à savoir: une femme, travaillant comme secrétaire, commis... et n'ayant pas complété ses études collégiales. Que devient l'objectif d'une plus grande accessibilité, par l'établissement de critères d'admission plus souples, si les bénéficiaires auxquelles s'adressent ces conditions particulières ont tendance à ne pas compléter leurs études? Ces abandons constituent 52% de la population étudiante.

Comment expliquer ce taux élevé? est ce que:

- les critères d'admission sont trop flexibles, donnant ainsi accès à des personnes sans expérience professionnelle pertinente ou sans formation académique pré-requise?
- les cours n'offrent pas des contenus appropriés aux besoins éducatifs des bénéficiaires ou une pédagogie andragogique?

Le certificat de Relations Industrielles n'a pas subi de réelle modification depuis sa création qui remonte maintenant à treize ans, malgré les bouleversements socio-économiques survenus ces dernières années ainsi que l'évolution de la discipline.

Ces faits ont amené les responsables du certificat à entreprendre une évaluation afin d'apporter les correctifs permettant d'atteindre les objectifs de démocratisation et de réponse à des besoins spécifiques dans un contexte d'éducation permanente.

Ce sont ces objectifs, en effet, qui confèrent une utilité au programme d'études.

Méthode

Dans ce contexte on peut parler d'une évaluation globale du certificat; évaluation qui sera mieux atteinte en s'inspirant du modèle "naturaliste" de Guba et Lincoln (1981), étant donné que l'utilité globale du certificat est mise en cause par le fait que les moyens pour atteindre les objectifs énoncés au préalable ne semblent pas être efficaces.

Pour réaliser cette approche "naturaliste", il faudra procéder à:

- des enquêtes auprès de personnes qui ont abandonné leurs études ainsi que celles qui ont gradué,
- une analyse de besoins de type alpha, se légitimant par le fait que les références viennent de l'extérieur du programme d'études et que les besoins à identifier se réfèrent à la survie et à la contribution sociale, à savoir: se trouver du travail, le conserver, améliorer son rendement ou encore obtenir une promotion. Ces informations permettront d'effectuer une évaluation de certificat concernant tant les conditions d'admission que le programme d'études (réponse ou non aux besoins éducatifs).

Cueillette des données

Les données nécessaires à l'enquête sont obtenues par:

1. Des entrevues téléphoniques auprès des personnes ayant abandonné leurs études afin de vérifier si les motifs se rattachent à une préparation académique insuffisante de la personne ou à l'inadéquacité du programme d'études. Un échantillon restreint et stratifié (en fonction des variables: sexe, expérience professionnelle et niveau de scolarité au moment de l'inscription) est utilisé.
2. Des entrevues individuelles auprès d'un échantillon aussi restreint et stratifié de personnes ayant gradué et étant encore aux études. Celles-ci vont être invitées à discuter de toute dimension leur apparaissant problématique dans le certificat, en dehors de ce qui est relié aux besoins éducatifs, puisqu'ils seront abordés d'une façon plus particulière.

L'analyse de besoins éducatifs de type alpha s'effectue en plusieurs étapes:

1. dans le cadre des entrevues téléphonique auprès des personnes ayant abandonné leurs études et des entrevues individuelles auprès des gradués, auxquelles s'ajoutent aussi des entrevues auprès d'employeurs, les personnes sont amenées à identifier les connaissances, compétences, habilités et attitudes requises par le champ disciplinaire,
2. ces différents témoignages sont regroupés sous la forme d'une liste d'énoncés,

3. cette liste est validée par un groupe d'experts (des professeurs de l'Ecole des Relations Industrielles, U. de M.) au moyen de la technique Delphi. Ceux-ci doivent ainsi parvenir à un consensus en ce qui concerne les énoncés devant être ajoutés ou retranchés de la liste initiale. Parallèlement, le même travail de validation est effectué par le comité du certificat au moyen de la technique du groupe nominal. Ce dernier est composé des responsables du certificat, d'un représentant de la direction de la F.E.P. ainsi que de représentants des milieux professionnels, des étudiants, des chargés de cours... et ce, dans le but de comparer le jugement de ces deux groupes. En effet, il semblerait qu'un des problèmes sérieux que rencontre l'analyse de besoins réside dans le fait qu'elle ne peut assurer une fidélité à ses résultats, d'une approche à l'autre ou même parfois d'un groupe de témoins à l'autre. Ainsi, ces deux groupes, qui jouent le rôle d'experts auprès des responsables du certificat, devraient parvenir à une liste d'énoncés similaires,

4. une fois la liste validée, des questionnaires sont élaborés afin de prioriser les besoins et d'établir jusqu'à quel point le certificat y répond. Ces questionnaires sont envoyés à un échantillon probabiliste et stratifié d'étudiants ayant gradué ainsi qu'à un échantillon intentionnel d'employeurs. Les étudiants, par leur expérience, et les employeurs, en se référant au rendement de leurs employés, cotent jusqu'à quel point le certificat: permet/devrait permettre d'atteindre chacun des énoncés. La cotation se fait au moyen d'une échelle de type Likert. Les employeurs ont aussi la possibilité de répondre "ne s'applique pas", si un type de tâche particulier n'est pas requis par le travail.

Analyse

Le contenu des entrevues est analysé au moyen de regroupements, de matrices classifiant tant les caractéristiques des sujets, où on retrouve les conditions d'admission, que celles du certificat, dans lesquelles on retrouve les contenus, didactiques... Guba et Lincoln (1981) et Patton (1980) élaborent cette approche.

Les énoncés des questionnaires sont analysés au moyen de l'approche suggérée par Hershkowitz et Shami (1974). Celle-ci permet de comparer visuellement les énoncés, en fonction de l'importance qui leur est accordée à l'intérieur du certificat et celle qui devrait leur être accordée, ainsi que les points de vue des divers répondants (bénéficiaires et employeurs). On arrive à la représentation graphique suivante:

Overall mean goal importance

overall mean goal attainment	U important goal, but unsatisfactory performance. Low level successful program	S important goal and satisfactory perfor- Successful program
	L less important goal and unsatisfactory performance Low level need at or below average	C less important goal but Satisfactory performance Critical need above average

Good importance critical function

tiré de Hershkowitz et Shami (1974) ainsi que de Witkin (1977).

Ces informations devraient permettre une évaluation valable du programme d'études et fourniraient des éléments clairs auxquels se référer pour prendre des décisions quant aux moyens (conditions d'admission et programme d'études) à envisager pour mieux atteindre les objectifs fondamentaux du programme d'études, à savoir, démocratiser l'éducation et répondre aux besoins éducatifs spécifiques de la clientèle.

Répercussions

Compte tenu du fait que la remise en question est fondamentale, la démarche suggérée pourrait servir de modèle d'évaluation pour les certificats s'adressant aux adultes et ayant des objectifs similaires, tout en subissant des ajustements. Il est déjà planifier de faire des évaluations similaires dans d'autres programmes d'études.

De plus, la recherche voudrait montrer que la réputation attribuée à l'approche inductive n'est pas légitimée et que la peur reliée à la complexité de son utilisation peut empêcher d'en tirer toutes les possibilités.

Il est à mentionner que des résultats partiels seront disponibles au moment de la conférence.

Références

GUBA, E.G., LINCOLN, Y.S. (1981). *Effective Evaluation*. San Francisco: Jossey-Bass Publishers.

HERSHKOWITZ, M. SHAMI, M.A.A. (1974). *Need Assessment and Goals Validation tor Maryland Public Education, Statewise Educational Needs Assessment*. Results from selected model states. Maryland: Ed by M. Hershkowitz.

KAUFMAN, R., ENGLISH, F.W. (1979). *Needs Assessment: Concept and Application*. Educational Technology Publications. New Jersey: Englowood Cliffs.

PATTON, M.Q. (1979). *Qualitative Evaluation Methods*. Beverly Hills: Sage Publications.

WITKIN, B.R. (1977). *An Analysis of Need Assessments Technique for Educational Planning at State, Intermediate and District Levels*. ED 108 370.

/nb
830128

The Relevance of the Future in Adult Education: A Phenomenological Analysis of Images of the Future

Paul J. Ilsley
Northern Illinois University

Introduction

This research concerns four thematic questions of increasing importance: 1) What is the significance of "images of the future?" 2) To what extent can we discern their essential characteristics or constituents? 3) By juxtaposing constituents of images of the future on adult education literature can we educe themes of the field of adult education? 4) Does a study of images of the future provide a useful conceptual base for the analysis of issues in adult education? The methodologies and approaches in this study correspond to these thematic questions. Though agreement can be found concerning the importance of images of the future among futurists and utopianists, definitions and usage of the term vary considerably. Regarding this study, as layers of meaning are discovered clearer and sharper definitions of images of the future evolve. For now let us consider a provisional definition that an image of the future is an abstract symbolic conception which takes its form as an idea, expectation, and/or belief system, concerning a future state of affairs, for the purpose of direction present action and/or illuminating options. If positive and optimistic, images of the future refer us to a state of affairs which is different from the present--a better world coming in another time. If negative, images of the future may reflect a world of fear and confusion.

Writers and social critics, such as Daniel Bell, James Mau, Robert Theobald, and Fredrick Polak, offer persuasive evidence that disunity occurs when images decay. At the same time they argue that societal shifts are occurring, or have occurred, from an industrial society to a post-industrial one. We in the West no longer cherish the values and images of the future which were important at the height of the industrial revolution.

At a closer level of abstraction we may ask, what are the contents of the images of the future held by adult educators? Which images of the future have flourished over time and which ones have vanished? By closely examining them we gain understanding of our purposes and a sense of our past. In short, we may discover how our images of the future promote and inspire, or suppress and limit, the mission of adult education.

Methodology

The methodology corresponds with the four thematic questions. In answering the first one a phenomenological approach is employed. Here phenomenology is utilized as a methodology which attempts to analyze the meaning of phenomena as free as possible from unexamined presuppositions. In this way reseachers are able to discover the essential structures and relationships of phenomena. An intensive analysis of images of the future, for example, gives us perspective of their types, variabilities, and influence. Seven phenomenological methods are employed for this purpose: investigating particular phenomena (phenomenological intuiting, analyzing, and describing), Investigating general essences (eidetic intuiting), apprehending essential relationships among essences, watching modes of appearing, watching the constitution of phenomena in consciousness, suspending belief in existence (bracketing), and interpreting concealed meanings. The result of this analysis allows us to approach thematic question three. Specifically, a schema is developed from the phenomenological analysis. It is based on the three essential constituents, ideational, operational, and valuational. That is, in one form or another, all images of the future may be assessed and identified by these essential characteristics.

Paul Ilsley: 501 Beloit Avenue; Forest Park, Illinois 60130.

Ten classical books of adult education are analyzed with the schema for the implicit and explicit images of the future. The books were chosen by professors of adult education at ten leading graduate study programs. The following two books received seven nominations each:

The Modern Practice of Adult Education (1973 and 1980), by Malcolm S. Knowles. And, The Meaning of Adult Education (1924), by Eduard Lindeman. The books which received five nominations include:

Adults as Learners: Increasing Participation and Facilitating Learning (1981), by Patricia K. Cross. American Ideas About Adult Education: 1710-1951 (1959), by C. Hartley Grattan. In Quest of Knowledge: A Historical Perspective on Adult Education (1955), by C. Hartley Grattan. The Design of Education (1972), by Cyril O. Houle. The Inquiring Mind (1961), by Cyril O. Houle. Adult Education: Outlines of an Emerging Field of University Study (1964), by Gale Jensen, A. A. Liveright, and Wilbur Hallenbeck, (eds.). A History of the Adult Education Movement in the United States (1962 and 1977), by Malcolm S. Knowles. The Adult's Learning Projects (1971 and 1979) by Allen Tough.

Findings

Doing full justice to the definitions of the term "images of the future" means examining its uses in literature from a broad array of disciplines, i.e., anthropology, business administration, economics, education, history, international relations, life sciences, philosophy, sociology, urban studies and future studies. Any thorough review of the literature, while serving as a statement of the importance of images of the future, also shows that wide gaps exist in our knowledge about them. Writers disagree regarding whether images of the future can be controlled and measured. Indeed, while some writers, particularly sociologists, believe that images of the future are measurable and controlled, other writers (Bundy, 1973 and Ellul, 1977) believe that in a very real sense images of the future control us.

The discrepancies among leading definitions of images of the future can be made plain and even reconciled in a phenomenological analysis. As such, properties can be ascribed to images of the future such as believability, duration, the number of adherents, scope, time span, degree of optimism, and realizability. By definition the future cannot be envisioned without images of the future. This means that manageable plans which take us into tomorrow are examples of images of the future and so are broad and developed utopianistic thoughts, such as abiding reliance on the promises of science. At the root of our goals, expectations, desires and dreams lie images of the future. If we examine closely the characteristics of images of the future, and the many examples of them, we may begin to discern their essential characteristics. The future is the provence of imagination; we cannot have knowledge about the future. Yet, our assumptions about the future serve as a powerful factor in our present actions. The claim can be made that images of the future are products of imagination which, in profound ways, influence behavior. They make sense to us as compelling and unifying forces, such as the shared beliefs of a culture, and they can be emotion laden, such as fears, hopes, and wishes. In this sense images of the future have three dimensions to them: an ideational, an operational, and a valuational. These three dimensions incorporate each constituent discovered in a phenomenological analysis. Moreover, the following schema is based on and organized by these dimensions.

Within Ideational Dimensions

- What is the nature of the projected end state?
- What is the time dimension, the projected end date and the duration?
- To what extent is the image within our control?

Within Valuational Dimensions

- How does the image influence people?
- To whom does it have meaning?
- What values will be served by the belief in and fruition of the image?

Within Operational Dimensions

- In whose opinion is the image realizable?
- Is the projected state probable?
- How would the present social order be modified to accommodate the image?
- How has the image changed through time?

Application of the Schema to Literature of Adult Education

The following six characteristics of images of the future result from the analyses of the ten adult education books and are designed to exemplify the visions of adult educators:

Images of the future are symbolic stimuli which have learned value and meaning for people. Wendell Bell (1964) discovered that leaders and elites of new nations, in spite of urgent survival problems, regard the future as an optimal state of affairs. Leaders of older especially industrialized countries, conversely, expect from the future a perpetuation of the status quo. There are interesting parallels to be explored concerning professions. We may hypothesize, for example, that images which predominate professions during early periods of growth are greater challenges to the status quo than are the images of a flourishing profession. In time, as professions gain traditions and policies, images of the future gain focus and precision.

Fifty-seven years separate the books of the sample. During that time the prominent images of the future have gained a formal quality. At the outset the images of the future of the field of adult education were broader in scope, greater in duration, but perhaps less controllable. Lindeman (1924) discusses human and societal potential in broad terms, such as "freedom-with" and "the potential of pure enjoyment." Grattan (1951 and 1959), likewise, leads us to the expansive images of liberal arts in his attempts at defining human potential. More recently, Jensen, et al., (1964) and Knowles (1973) define images in measurable terms, such as mastering a predetermined set of competencies. Houle (1963 and 1973), Tough (1971), and Cross (1981), are not intent on explicitly stating images of the future in connection with human potential. While they may define learning as a positive learner-controlled endeavor, the images of the future with which they appear to be most concerned are associated with professionalism.

Through sharing beliefs and modeling a future state of affairs people gain value and meaning from the future. Which images survive the longest? It appears a relationship exists between believability and realization. The more faith and belief we place in a certain future, the greater chance it has to survive and be realized.

In adult education, at least two images have advanced successfully since 1924 to the present. The first is the belief in a learning society. The second is belief in self-directed learning. Not only have both images remained important but they have actually been embellished along the way. The learning society is to Lindeman (1924) a natural consequence of a society in which the people are dedicated to growth. To participate in society is to learn. Furthermore, life is learning, and society is a huge classroom. Following Lindeman's advice adult educators need not do anything to bring about a learning society other than to help people realize that it is there.

Belief in a learning society has meant different things to other authors, including a variety of roles for adult educators. Lifelong learning, the fundamental principle of the learning society, to Jensen, et al., is a requirement of living. Why? It wards away knowledge and skill obsolescence. The role of adult educators is to supplant obsolescent knowledge with current and more useful information. Determining what is current and useful poses professional challenges to the field. Knowles regards the learning society as one in which adult educators produce competent people. To Knowles, adult educators are not only the watchdogs for obsolescence, they are also keepers of the technology appropriate for adult learning situations. The learning society, therefore, provides technical challenges to adult educators.

The other consistent theme in adult education is self-directed learning. Through time it has become an increasingly complicated issue, evolving from voluntary learning as important for its own sake, to self-directed but controlled learning. The differences result again from increasing emphasis on the role of adult educators in directing the learning process. To Jensen it is conceivable that learning will assume less optional status for some adult learners. To Knowles all people ought to master certain competencies. And to Cross, if adults are not volunteers for learning the most crucial subject matter, perhaps mandating it is better than nothing. Through time, paradoxically, the theme of voluntary learning has gained properties of mandatory strategies.

Images of the future may be private, sub-cultural, or cultural. Images of the future can be differentiated according to the number of adherents. Some images are private, others are group-specific, while still others are common to an entire society. Moreover, in a pluralistic society it is expected that some images of the future remain private or group-specific. Images begin privately and through time gain adherents. Why do images gain adherents cannot be known with precision. Generally speaking, the greater the number of adherents, the more difficult it is to influence an image of the future.

Images of the future are tools for assaying the vitality of a social order. An examination of group images of the future provides an understanding of its values, options, and alternatives for action. Clear understanding a group's conception of the future improve a decision-maker's ability to discern the root differences of competing forces within a single issue. Without attempting to provide a complete analysis it may be said that many images of the future which exist for adult educators have been spawned from images of the future of other professions, most notably psychology. In other words, the same road toward legitimacy traveled by psychologists is also taken by adult educators. Profound influences are thereby felt in research techniques and professionalization. Emulation of the social sciences can be detected in the sample. Jensen, et al., provide a blueprint for legitimacy in university settings. Tough and Cross offer suggestions for improving our psychology-based theory and how we can improve linkages with developmental and learning theorists.

The issue here is not that psychologistic research is valueless to the field of adult education. Rather, it is suggested that our psychologistic images of the future are historical accidents. For example, following the traditions of Dewey, adult education might have been a philosophically-based discipline, meaning that it might reject models of human development and solutions to human problem through non-human technical means. Or adult educators might have been more heavily influenced by liberal sociologists and activist, such as Karl Marx, Saul Alinski or Paulo Friere. Such speculation is, of course, pointless. Of more importance is whether adult educators are content with the direction of the field.

A sequential pattern of increasing rigidity seems to characterize the images of the future contained in the most recent seven books in the sample. As the images become more closely aligned with science greater emphasis is placed on consistency of effort as if learning is assumed to behave according to as yet undiscovered laws. Therefore, subjects which receive primary attention include program planning, models for learning, instructional technology, and research technique. Such was not the case in the writing of Lindeman and Grattan. Contrarily, they regard the trappings of professionalization and specialization as detrimental to the learning process and warn us in advance of possible problems. To Lindeman, specialization in adult education will cause us to lose sight of our original purposes and instead focus on functions of specialization (1924, p. 82-84).

Images of the future are counter-realistic either through the pursuit of a desirable image or the elimination of an undesirable one. Images of the future have an intending quality in regard to change. The type of change promoted can be of two types: 1) the creation of a new and, perhaps, better world, and 2) the elimination of harmful social conditions. In adult education few prevailing images truly challenge the status quo directly. Among the sample, at any rate, only Lindeman's images of the future fall in the first type. The preponderance of the rest fall within the second. Undesirable conditions writers suggest eliminating include illiteracy, marginality, and professional incompetence. An exception is the advent of a learning society. Tough, among others, describe in detail the effects of the achievement of a learning society. Otherwise, the images of the future in adult education are primarily reactions to undesirable conditions.

Images of the future can exist in opposition to other images of the future. The following are representative of the types of conflicting images of the future among adult educators.

Individual actuality versus institutional or societal actuality. Individual goals do not necessarily conflict with institutional or societal goals, but often they do. Each author wrestles with the question of how adult education should improve society. Lindeman believes that if individuals reach their creative potential society will improve. Grattan assumes that the mastery of liberal arts is the key to resolving social problems. Knowles and Jensen, et al., advocate mastery of a standard list of performance skills and building new institutions for the betterment of society. Houle and Tough admit that the power of learning itself may influence social improvement and Cross argues for professionalism and psychologism of adult education which may then become a useful force for societal improvement.

Life as curriculum versus the life-curriculum. A fundamental contradiction exists regarding whether adult educators should improve learners' independency, paving the way for a society of autonomous learners, or whether adult educators should concern itself with performance skills as requisits to life. Are there or are there not experts who should inform adults what they should think, feel, or do? Is there or is there not subject matter, and ways to learn that subject matter, which all adults should know? The authors are divided on the issue. Proponents of life as curriculum include Lindeman and Houle. Proponents of a life curriculum have gained ground as programs such as competency-based education have grown.

Egalitarianism versus elitism. Can adult education be both equal and excellent? There seems to be a trade-off. The type of liberal arts curricula advocated by Grattan, in spite of the best intentions, primarily serve the elite. Cultural diffusion is merely an ideal. On the other hand, a curriculum based on minimum standards for competence, as advocated by Jensen, et al., and Knowles, offers predictable patterns for success. Of course the advantage is that standards for competence are intended for everyone. For this reason it appears that in the sample all but Grattan opt for the former.

Flexibility versus specialization. Adult education is reported to be a flexible and responsive profession. It may have marginal status but it is not rooted in set ways. This view is widely believed even as specialization occurs. The latest book in the sample, written by Cross (1981), is representative. She argues that adult education should continue to be non-formal and responsive to the needs of learners. In the same book she presents a case for specialization of function, even suggesting the new speciality areas of research. It may be shown that specialization of this type promotes the rigidification, not the flexibility, of adult education. For one thing specialization restricts responsiveness because parameters are set regarding what we should and should not research. Further, as we specialize, we begin to use jargon with greater frequency, such as "C.O.R." and "C.A.L," terms which are nonsense to learners, thereby excluding them from the business of education. Champions of flexibility include Lindeman and Grattan. They direct us to the conclusion that flexiblility and responsiveness require purposeful acts. However it is clear that images of professionalization have eroded images of flexibility.

Certainly there are other conflicts in the field of adult education, and in many ways the ones provided above overlap. Perhaps they are sufficient to demonstrate that images of the future can conflict, even cancel other images.

Does a study of images of the future provide a useful conceptual base with which we may analyze issues in adult education. Obviously it is just one approach. At this juncture we confirm the expected conclusion. Images of the future are symbolic and focused mental conceptions which always have ideational, operational, and valuational properties. To have meaning images of the future must capture the belief of individuals, though beyond this they are not truth or time bound. Their meaning and worth to people specifically entails empowerment through the illumination of present choices. Confirmation of their utility is found through recognition of purposeful change.

References

Bell, Daniel. The Coming of the Post Industrial Society. New York: Basic Books, 1973.

Bell, Wendell. Jamaican Leaders: Political Attitudes in a New Nation. Berkeley, California: University of California Press, 1964.

Bell, Wendell, and James Mau. Sociology of the Future. New York: Yale University Press, 1971.

Bundy, Robert, Editor. Images of the Future. Syracuse, New York: Prometheus Books, 1973.

Collins, Michael. "Competency in Adult Education: Applying a Theory of Relevance." Unpublished doctoral dissertation, Northern Illinois University, 1980.

Cross, K. Patricia. Adults as Learners. San Francisco: Jossey-Bass, 1981.

Draves, William, Editor. The Learning Connection. Manhattan, Kansas: The Free University Network, Spring, 1982, #3.

Ellul, Jacque. The Technological System. New York: Continuum Press, 1977.

Grattan, C. Hartley. American Ideas About Adult Education, 1710-1951. New York: Columbia University Press, 1962.

Grattan, C. Hartley. In Quest of Knowledge. New York: Association Press, 1955.

Houle, Cyril O. The Design of Education. San Francisco: Jossey-Bass, 1973.

Houle, Cyril O. The Inquiring Mind: A Study of the Adult Who Continues to Learn. Madison, Wisconsin: The University of Wisconsin Press, 1963.

Husserl, Edmund. The Idea of Phenomenology. The Hague: Martin-Nijhoff Press, 1964.

Jensen, Gale, A.A. Liveright, and Wilbur Hallenbeck. Adult Education: Outlines of an Emerging Field of University Study. Chicago: Adult Education Association of the U.S.A., 1964.

Knowles, Malcolm S. A History of the Adult Education Movement in the United States. Huntington, New York: Robert Kriegar Publishing Company, 1962 and 1976.

Knowles, Malcolm S. The Modern Practice of Adult Education: From Andragogy to Pedagogy. New York: Association Press, Follett Publishing Company, 1973 and 1980.

Lindeman, Eduard. The Meaning of Adult Education. Montreal, Canada: Harvest House Publications, 1924.

Mau, James. Social Change and Images of the Future. Cambridge, Massachusetts: Schenkman Publishing Company, Inc., 1968.

Polak, Fredrick L. The Image of the Future: Enlightening the Past, Orienting the Present, Forecasting the Future. New York: Oceana Press, 1961.

Speigelberg, Herbert. The Phenomenological Movement: An Historical Introduction. The Hague: Martin-Nijhoff Press, 1982.

Theobald, Robert. Beyond Despair. Washington, D.C.: Seven Locks Press, 1976.

Tough, Allen. The Adult's Learning Projects: A Fresh Approach to Theory and Practice in Adult Learning. Toronto: Learning Concepts, the Ontario Institute for Studies in Education, 1971 and 1980.

An Analysis of Perceptions of Adult Educators from Five Different Settings

Waynne B. James

Oklahoma State University

INTRODUCTION

Literature and research in the field of adult education has resulted in the accumulation of a body of knowledge regarding adult learning. The field of adult education acknowledges the diversity of agencies, institutions, programs and clientele. It is generally accepted that the common body of knowledge regarding adult learning can be applied to any of these diverse adult learning settings. However, to date, only one has compiled a list of the principles of adult learning as presented by the literature and research in the field of adult education. Identifying, synthesizing and verifying the adult learning principles should increase the potential usefulness of the principles in developing and implementing adult education programs. In addition, there has been no investigation of the perceived application of the principles of adult learning in a variety of adult education settings.

The practitioner is the agent for implementing the adult learning principles and is a crucial variable in the teaching/learning transaction. Knowles (1980) believes that the teacher's behavior is probably the most influential factor affecting the character of the learning climate. Thus, data gained by comparing the teaching of adults in five settings with research on how the adult learns best has implications for staff development programs, as well as for individual instructors who are sensitive to the unique needs of adults.

Purpose

The purposes of this study were (1) to identify the basic principles of adult learning that underlie adult education programs as affirmed by authoritative sources; (2) to determine the extent instructors in the five settings of a) University Extension, b) Community College, c) Business and Industry, d) Patient Education and e) Agricultural Extension, perceive themselves as implementing these principles, and (3) to compare responses of instructors in the five different settings.

This study sought to answer the following questions:

1. What are the basic principles of adult learning that underlie adult education programs?
2. To what extent do instructors in the five settings perceive themselves as implementing these principles?
3. How do rankings/results from the five settings compare?

Dr. Waynne B. James, Associate Professor
Oklahoma State University
417 Classroom Building
Stillwater, OK 74078
(405) 624-6275

Definitions

The following definitions apply throughout the study:

Authoritative sources: information resources for the generation of principles. These resources include recognized leaders in the field, books, articles, research reports, and unpublished dissertations.

Class setting: the place where the educational activity occurs, used synonymously with facility, learning environment, and meeting place.

Courses: educational activity identified with a subject or specified focus for learning, used synonymously with activities, class, sessions, and offerings.

Instructor: one who initiates and facilitates the educational activity, used synonymously with teacher, trainer, practitioner, patient educator, and extension agent/extension educator.

Principles: accepted or professed rules of action or conduct.

Student: the recipient of the educational activity, used synonymously with participant trainee, patient, clientele and target audience.

METHODOLOGY

The study was conducted in five phases: (1) identification and validation of principles in adult education, (2) development of the data collection questionnaire, (3) collection of data, (4) analysis of data, and (5) presentation of information from the five settings.

Identification and Validation of Principles

Review of Literature

A six-person research team conducted the first phase of this study by comprehensively reviewing the available resources in adult education. Each team member reviewed literature in one or more of the following areas of adult education: philosophical, psychological, social and socio-economic, cognitive, environmental, physical and methodological. This literature included textbooks, published reports of research, journal articles, and unpublished doctoral dissertations. Out of these searches, each team member submitted a written report to the group relating findings from the literature review. In addition, each team member compiled a list of the major principles from the literature they reviewed. The individual lists were then combined into a single list. Through corporate efforts, the principles were grouped into categories and synthesized into concise statements. Then, the team, through consensus, established a tentative list of eight principles with one or more short explanatory statements for each principle.

Refinement of the Principles

Next, the tentative principles with the explanatory statements were submitted to a jury of experts in adult education to rate via a modified

Likert scale with values of 0 to 5. This jury was also asked to respond with suggestions for modifying the principles to make them consistent with what they perceived as the basic theoretical orientation of adult education.

The jury expressed agreement that the eight principles were basic to adult education. Based on the jury's recommendations, the research team modified some wording, added concepts to the explanatory material, and added a ninth principle. The added principle "Adults are motivated to learn by a variety of factors," focused on concepts which the team had previously included under Principle two which dealt with diversity and Principle five which dealt with adult readiness to learn and the adults' trend toward a life-centered orientation to learning.

The resulting nine basic principles as identified from the literature and validated by the panel of experts are as follows:

PRINCIPLE 1.	Adults maintain the ability to learn.
PRINCIPLE 2.	Adults are a highly diversified group of individuals with widely differing preferences, needs, backgrounds, and skills.
PRINCIPLE 3.	Adults experience a gradual decline in physical/sensory capabilities.
PRINCIPLE 4.	Experience of the learner is a major resource in the learning situation.
PRINCIPLE 5.	Self-concept tends to move from dependency to independency as an individual grows in responsibilities, experience, and confidence.
PRINCIPLE 6.	Adults tend to be life-centered in their orientation to learning.
PRINCIPLE 7.	Adults are motivated to learn by a variety of factors.
PRINCIPLE 8.	Active learner participation in the instructional/learning process contributes to learning.
PRINCIPLE 9.	A comfortable supportive environment is a key to successful learning.

The team used a second jury (consisting of adult education leaders with a high degree of visibility in the field of adult education, having geographic dispersion and philosophical heterogeneity) to validate the importance of each of the refined principles. The jury rated the principles on a modified Likert scale with values from 0 to 5. Principles had to receive an average of 3.75 or more to be considered basic principles of adult education. All nine principles received a value of 4.54 or higher from the validation panel. Mean values for each of the nine principles by the validation panel are reported as follows:

Principle	Mean
1.	4.87
2.	4.83
3.	4.75
4.	4.66
5.	4.54
6.	4.58
7.	4.79
8.	4.87
9.	4.62.

Development of the Questionnaire

The second phase of this study consisted of creating a data collection questionnaire. This was followed by field-testing the questionnaire, numerous revisions, and checking for validity and reliability.

From the refined list of principles, the research team developed statements which represented the application of some aspect of each of the validated principles. The team used these statements to design a questionnaire to assess the extent of application of the principles. The initial questionnaire contained 47 statements, four to six for each of the nine principles. Statements were randomly ordered for placement in the questionnaire. Instructions to the respondents asked that they indicate how often they applied the activity described in each statement by checking "Always," "Frequently," "Sometimes," "Never," or "Not applicable" to their situation, on a modified Likert scale.

Because the terminology for each population to be studied by the research team differed significantly, it was necessary to adapt the questionnaire to each interest area. Each team member changed only those terms inappropriate for his/her area. Those terms that created communication problems related to (1) the recipient of the educational activity (i.e., student, participant, trainee, patient), (2) the person responsible for the educational activity (instructor, teacher, trainer, facilitator), (3) the location of the educational activity (classroom setting, facility, meeting place) and (4) the educational activity (course, activities, class, seminar, programs). Other than these modifications, the questionnairie statements remained identical.

Field-Testing and Refinement of the Questionnaire

The research team used adult educators and graduate students in adult education courses in five different field tests of the questionnaire. Following each field test, the team refined the statements. The final questionnaire was reduced to 45 statements.

All but two items were placed under a principle with 70 percent agreement by panel members. Statement 9 was placed under both principle 2 and 8, while statement 14 was placed under both principle 1 and 2, as can be seen below. Means for these statements, which represented only a 50 percent agreement by the validators, were therefore counted under both principles.

There were four to six statements which related to the application of each of the nine principles. Each principle was assigned a code phrase or word to make the report of data easier.

Reliability

The research team checked the questionnaire for reliability by test-retest of individuals with backgrounds in adult education. Individuals in this group reflected backgrounds from nursing, industrial training, college teaching, general university extension, and agricultural extension. A correlation of .70 was obtained for an average reliability coefficient.

Collection of Data

The research team selected five different adult education settings in which to investigate the extent to which practitioners perceived their use of the established principles. Each team member selected a population according to his/her interest area, training background, relation to their field of study, and the degree to which adult learners were present in the field.

Analysis of Data

Data from each study were analyzed in two parts. The first part of the data analysis was descriptive in nature. Frequency analysis and percentage distributions were performed to present a profile for each setting. Second, the responses representing the perceived application of the principles of adult education were analyzed. The mean values for each of the 45 questionnaire statements by instructors were calculated. The value for each principle was computed by averaging the responses for statements corresponding to that principle. Finally, principles were rank ordered according to mean for each setting.

Presentation of Findings

The mean values and rank order for the nine principles in each of the five settings are presented in Table I. Ranges for all principles are discussed below.

The range of means for hospital patient education started at 2.74 and ended at 3.32. All instructors perceived themselves as implementing the principles to a "frequent" degree.

Means for university extension instructors ranged from a low of 2.76 to 3.29. Instructors perceived themselves as implementing the principles to a "frequent" degree.

Community college instructors responses ranged from 2.24 to 3.15. Principle two (diversity) was perceived to be implemented "sometimes" while the other eight principles were perceived to be implemented to a "frequent" degree.

The range of means for business and industry started at 2.30 and ended at 2.87. Business and industry personnel perceived themselves as applying Principles one (ability to learn), two (diversity) and eight (active participation) "sometimes". The remaining principles were perceived to be applied "frequently".

Means for agricultural extension instructors ranged from 2.54 to 3.20. Instructors perceived themselves as implementing the principles to a "frequent" degree.

No two of the five settings had exactly the same rank ordering of principles according to mean response. However, a comparison of the rank order of means reveals that four of the five settings held the same top principle. Principle nine (supportive environment) was ranked highest by all but business and industry.

Principle three (physical change) was ranked highest by business and industry, while patient educators and agricultural extension agents perceived themselves as applying this principle second most frequently. University extension instructor responses ranked this principle fourth and community college instructor responses ranked this principle as sixth.

All five settings perceived the mean ranking of Principle one (ability to learn) as either eighth or ninth. Principle eight (active participation) was perceived as a low rank by the settings: sixth for agriculture extension; seventh for university extension and community college; tied for eighth/ninth for business and industry; and ninth for patient education.

REFERENCES

Knowles, Malcolm. The Modern Practice of Adult Education: From Pedagogy to Andragogy. Chicago: Follett Publishing Company, 1980.

TABLE I

RANK ORDER AND MEANS OF PRINCIPLES BY SETTING

Principle	Hospital Patient Education		University Extension		Community College		Business & Industry		Agricultural Extension	
	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean
1. Adults maintain the ability to learn.	8	2.76	8	2.85	8	2.56	8	2.30	9	2.54
2. Adults are a highly diversified group of individuals with widely differing preferences, needs, backgrounds, and skills.	4	3.07	9	2.76	9	2.24	7	2.44	7	2.73
3. Adults experience a gradual decline in physical/sensory capabilities.	2	3.24	4	3.12	6	2.66	1	2.87	2	3.15
4. Experience of the learner is a major resource in the learning situation.	5	2.99	2.5	3.25	2	3.03	5	2.64	5	2.90
5. Self-concept tends to move from dependency to independency as an individual grows in responsibility, experience, and confidence.	7	2.80	6	2.99	5	2.80	6	2.53	8	2.64
6. Adults tend to be life centered in their orientation to learning.	3	3.16	5	3.05	4	2.81	2	2.79	3.5	3.06
7. Adults are motivated to learn by a variety of factors.	6	2.89	2.5	3.25	3	2.92	4	2.76	3.5	3.06
8. Active learner participation in the instructional/learning process contributing to learning.	9	2.74	7	2.61	7	2.61	9	2.30	6	2.82
9. A comfortable supportive environment is a key to successful learning.	1	3.32	1	3.29	1	3.15	3	2.78	1	3.20

BEST COPY AVAILABLE

RETIREES WHO ARE POSITIVE GIVE ADVICE TO THOSE WHO ARE NEGATIVE: IMPLICATIONS FOR ADULT EDUCATORS

BURTON W. AND DORIS J. KREITLOW

OVERVIEW----Within a comprehensive investigation of 140 adults who had retired in a positive way one objective was to determine the advice that positively retired persons (+Rs) would give to those whose retirement was negative. Quotations from tape recorded interviews with the +Rs, summaries of their advice and the implications of this advice for adult educators are presented.

Gerontological literature usually focuses on adults with problems and little is known about those in the mainstream. This deficiency in the literature led to the choice of Grounded Theory as the most useful approach to research that deals with that mainstream.

Interviews were taped with positively retired persons (+Rs) in nine diverse settings in England and the U.S.. In each setting, 20 to 26 persons were first sought out to name individuals in their community whom they believed had retired in a positive way. Ten to 22 individuals were then selected for in-depth interviews in each setting. These were the persons named most frequently in the reputational interviews. Variations among settings were rural and urban, white, black and oriental, working class and wealthy, total community, older adult clubs and age segregated high-rise apartments.

The advice the +Rs gave emphasized many of the characteristics that the +Rs themselves demonstrated. In rank order their characteristics were: they volunteer, they are sociable, busy and active, happy, look ahead rather than back, independent, continue to learn, believe in work and stay involved in the community. The thread that integrates these characteristics is purposefulness. Individuals in the study demonstrated many compelling purposes and led the researchers to theorize that the ultimate prerequisite for a positive retirement is having a continuing and abiding purpose as a focus in life.

THE DATA ---- In this paper we ask you to imagine a situation where all the 140 persons interviewed were brought together for a discussion on this question, "What advice would you give to a person you know who has retired in a negative way?" Burt is the moderator and will coordinate the discussion. The responses of the interviewees are direct quotations from the answers given in the original interviews.

MODERATOR: Most of our discussion to this point has been about the characteristics of the positively retired person. Now we're going to ask help for those who are not considered to be as positive in retirement as you are. From what most of you have told us, you do know people whom you believe have retired in a negative way. What advice would you give such people? Think about this for a moment. If you have had any success in giving such advice in the past, please share it with us. Who will respond first?

MRS. KANAHELE (THE CENTER, HAWAII): "I'd tell them, 'Come let's go.' I'd ask them to go out with me. Some people feel that they have nothing to do and I tell them to get out and keep busy. I say to them, 'If you stay home you are going to get old.' So we go out.

" When my husband retired he wanted to stay home and play with his artifacts. I would look at him and say, 'Gee, you sit here all day

Box 865
Grand Marais, Minnesota
55604

long, come out with me and meet people other than those in church.' (He is a retired minister, you know.) Staying home isn't enough. People should look for something to do outside of the home. You get stale if you are cooped up in the house!".

HENRY GEORGE (BRIGHTSVILLE, WISCONSIN): "Mrs. Kanahele is right. I know people in town who don't go any place. They should go out and have a good time but it's difficult to get them out. They have plenty of money but that doesn't make the difference. We try to get them out, but they don't move. Some of them say, 'I shouldn't have quit work. there's nothing else to do!' Maybe they should have stayed with their work. All they do now is sit. If they haven't learned how to spend time early in life it's tough to get them out now. They don't think they'd enjoy it."

ROSE CLAYTON (COOP PENSIONER'S CLUB, ENGLAND): "I should say to them to get about a lot. Go to these 'Over Sixties' and other clubs. Go dancing; it keeps the limbs going. Do something. Don't sit about and mope. If you keep sitting about the bones don't want to get moving again. My next door neighbor was that way and I got her out. She didn't know what social life was like until I went and moved next door to her. I don't believe in going and taking things to her, and sitting and talking and having tea. I asked her to go with me to the Club for a dance. She asked if her sister could go too, and soon there were eight of us going. That's how I got her out of the house."

CLYDE GILL (BRENTHOLME, ENGLAND): "Can I give you an illustration? One of my colleagues was an extremely capable individual. He retired a few months after I did. A year later I met him at one of our conferences. I'd always had a high opinion of him. I asked him about his retirement and he said, 'I'm hating every minute of it! I'm sick and tired of cutting the grass. I'm sick and tired of watching television.' I said, 'You really stagger me! I can't find time to live almost!'

"Then he said, 'How can I pass my time?' I said, 'You're a very intelligent man. You have written for trade magazines before. Why above anything else, don't you write?'

"He said, 'What can I write about?' I said' It doesn't matter, but use your brain. Sit down and write.' Soon after I retired, we had a bad winter and there wasn't much I could do so I decided to write one or two stories and submit them to the BBC. They didn't like them, but it didn't matter. It occupied me.

"I didn't see him again for two years. He was a completely different man. He had started writing just for his own amusement. He'd joined the Parish Council and taken up golf. Yet for two years before I had talked to him, he hadn't known what to do with his time. And he was an extremely intelligent man! It amazed me that he couldn't think for himself how to occupy his time when he first retired. I think my talking to him started him thinking. It gave him thought."

OLIVIA GRACE (MARTIN LUTHER KING CENTER, MIDWEST): "I gave advice to one of the old members about this. She's about 80. I visit her often. She started me coming to the Center. Now she done sit down! I say to her, 'I'll come by and pick you up and we'll go together. We'll be glad to have you.' But she sits there. It would be good for her to get out of the house. I give her advice to get out of the house and go to the Center. And to walk. I bring her things to do--piece work (for the quilts made at the Center). She needs to be doing."

MODERATOR: From what I've heard, you believe that being busy and active in retirement is so important that you advise others to get involved in both physical and mental activities. What other kinds of advice do you give?

LISA BELL (THE KING CENTER): "I would give advice sometimes. If they are harsh, I speak to them and tell them, 'You gotta smile.' Whether you feel like smiling or not. You still gotta smile. Kind words gain people. You don't gain no peoples by talking harsh. Give people a nice smile."

ROSE WILLARD (BRENTHOLME): "I have a group of friends who play bridge. I couldn't do that myself, but their bridge keeps them alive. Bridge is having a great interest in something. It's good for them.

"I have another friend who is very, very sick physically, but she's never despondent. A bundle of smiles. She's over 85 and does needle work, tapestry, and makes Christmas gifts for family and others."

MODERATOR: You are saying that smiling, mixing with others and being friendly is part of a positive retirement. What other advice have you given in the past?

ANDY HARPER (LOGAN TOWERS, NORTH CAROLINA): "I tell them to get involved in things that will make their life more worth while. Volunteering will bring a lot of happiness. I like to help other retired persons take their first step. After that they can walk alone."

JACK PRESTON (THE GEORGE WASHINGTON CARVER CLUB, MIDWEST): "I advise them to participate in things, lend service, do things for others. Why do you think God left you around if you can't do things for somebody else?"

JOSE SANTOS (THE CENTER, HAWAII): "Voluntary work is important for me. Any work is important. It can be clerical, manual or janatorial. You have to have something for mind and body. Age discrimination interferes with paid work so voluntary work is good."

MODERATOR: It doesn't surprise me that you are advising retired persons to do volunteer work because most of you are doing it yourselves and from what you've told us you have recieved great personal rewards in the process. Someone suggested to me earlier that the simplest advice anyone can give is to try to get people out of the house. Do you advise that?

LYDIA OLIN (LOGAN TOWERS): "I have a sister that won't take my advice or anyone elses. She owns her own home. She's older than I am, she stays home, gets help with her yard and she's tired all the time. I finally told her, 'I won't sympathize with you anymore.'I told her that she should sell her house and do like me and enjoy life. She enjoys being a slave to that house of hers.

I tell people to get out and mix. Take the effort to get out and go. My sister doesn't want to go to the trouble of getting ready to go any place, so she sits home. That's bad, very bad."

KAREN MARTIN (BRIGHTSVILLE): "I tell people to get away from the house and take part in things whenever they have the time. Don't wait until retirement to do that, but when retired you do have the time. Don't stay alone. I have changed some people. I helped one lady who had a nervous breakdown. She didn't want to see people. I deliberatively sat and ate lunch with her at the Club twice a week for two months. After lunch she'd get nervous and go home. I'd tell her to come back and to make sure that she did I'd pick her up. After awhile she began coming on her own and now comes and stays, plays cards and many other things. I believe that I was responsible for this change in her. I got her to take part. People shouldn't stay home and be alone. I feel so deeply about this that I often go and sit with them for awhile myself. There are things that we can do to get these negatively retired people to be a part of the community. There are some good models for those people here at the Club. People like Faye Andrews have a good retirement. She doesn't let any grass grow under her feet."

MODERATOR: The advice I've heard you give has concentrated on:

1) Being busy and active in mind and body
2) Being friendly, smiling and sociable
3) Volunteering to help others
4) Getting out of the house.

These four types of advice were also the ones most often mentioned when we interviewed each of you some time ago. Before I summarize the 140 interviews I wonder if there is anything else you would like to add? Here's your chance.

HERBERT COOK (COOP PENSIONER'S CLUB, ENGLAND): "I always say to people who ask, 'What's your secret?', I say there is no secret. Just keep this active. (He points to his head.) Keep your body active and for goodness sake don't go and sit before the fire. Get up and get out. Get out and about. I say, 'Come out and do a bit of dancing.' Some say that they don't know how so I say, 'Come out and learn'. That's my way of things. That's my advice. I honestly believe that is the secret of keeping going. Many have followed it, there are many in my dance class that I've gotten out. Oh yes. The worst thing for a person at 65 is to say, 'That's it, that's the finish.' It's daft to say that. That's the worst."

EMILY ANDERSON (COOP PENSIONER'S CLUB): "I think there are some people we can't help. I've known this one lady for about 20 years and I tried to help her, she really didn't want to take my advice. I took her on a holiday with me to Scarborough and she was very, very negative. I didn't think that she could live long that way and she didn't. I tried all ways to help, honest I did, and I couldn't help her."

CYRIL HOLMES (BRENTHOLME): "That's too late to give advice. The advice should be given at age 50. It's no use giving anyone advice at 65. It's too late. I found out by sheer accident how to help people who try to pull out of things. I said to such a lady,'Go to church regularly. Don't give up. When you go to church don't expect people to fall on your shoulders straight away. You have to work to get in. It's no good to try and ingratiate yourself by offering to do this and that. The best way is to just go, be a member, be seen and eventually people will speak to you.

Before people retire they must develop interests because retirement can be a very long boring business when you can sit and watch television by the hour. I know some who sit and watch the test card! They've nothing else to do."

MODERATOR: From what you've said there have been failures and successes in your efforts to help those who are negative. Much the same was passed on to Doris and to me during the individual interviews. I know that there is more you could contribute today but instead I will summarize what you told us when we first talked to you.

First, 123 of the 140 interviewees gave advice that encouraged other retirees to be active. Fifty-eight were very specific in telling others to keep busy, get your mind and body involved. Forty-three told others that it was essential for them to get out of the house. Thirty-two advised those who were negative to join a Senior Center, Darby and Joan or a Pensioner's Club and 29 specifically recommended that a hobby be developed, any kind, but preferably one that was a challenge to both mind and body.

There were other kinds of advice too. To follow the advice would require being active as a volunteer in hospitals, Senior Centers or to personally help disadvantaged neighbors. Thirty-six suggested volunteering as a way out of a negative retirement. Fifty-four suggested that an attempt be made to be more friendly, to get out and mix with others. Many of you actually took a negative person in tow and tried to help them along. Some told us that it was difficult to change a "sourpuss" but it sometimes worked.

One of the characteristics that you yourselves have is that of being forward looking.You are positive in the way you plan for tomorrow. You tend to be open-minded and creative in the way you think. So, too, did 27 advise others. Nearly as many, 25, suggested a very simple way to change that negative retirement. Just get out and "enjoy yourself". Go out and "have fun". That, too, is a characteristic which over one-third of you identified as why you were selected for interview. One in five of you advised the negative to make an effort to learn something new, to take a class, to sign up for an Elderhostel program in the summer or pick an area of interest and learn on your own.

There was other advice given by a few of you. This included: 1)Accept what is, be ready to live day by day. 2) Don't look back. 3) Seek out religious activities, join a church. 4) Travel more, join a Senior Citizen tour group. 5) Find a new career.

Finding a new career is something many of you have done. We found persons who have retired two, three and even four times----positive all the way.

In addition to direct advice, many of you provided us with suggestions that begin with the word "don't". Most of your "don't" comments were made in discribing your effort to move retired persons from being negative in their thinking and to get them to be more active in mind and body. There were a few other "don'ts" that included, "Don't dwell on money." "Don't wait for handouts." "Don't just a taker be." "Don't accept everything and do nothing." And, "Don't think only of yourself."

I know each of you have other ideas you wish to share but we must stop for now. From what has been said there are certain kinds of advice you most often give to those who are negative. You advise them to be active in mind and body, to get involved with other people, to join a Senior Citizens' organization, to volunteer those special talents to help others and by whatever means, plan to get out of the house.

IMPLICATIONS FOR ADULT EDUCATORS----

1) Adult educators should emphasize learning programs which lead to the development of skills and the acceptance of values which will be useful throughout life. For example, the folk skills that some adult program administrators and politicians say shouldn't be funded (cake decorating, lapidary, upholstery, etc.) may in the long term be the most cost effective for society because they aid in keeping an older adult independent, active in pursuit of personal goals and out of a nursing home.

2) Develop programs that educate for volunteerism. For example, the leader training program for volunteers that Cooperative Extension developed for youth and homemakers in the 1920's, 30's and 40's are having a payoff in Senior Centers in the 80's

3) Local education agencies need to form a closer working relationship in program planning with Senior Centers and groups catering to

the older adult. For example, the Community Education program in the schools can and should provide daytime programs in Senior Centers.

4) Churches need to recognize their unusual opportunity to develop programs that provide purposeful activities for the elderly. These activities could open doors to learning. For example, The Food Shelf and other programs developed during an economic recession need many volunteer workers. The kind of help needed is the kind that elders would be happy to learn. There is a need for inventories, sorting, packaging, recording and distributing with a smile.

5) Adult education programs should integrate content and activities that meet retirement needs into programs for all ages. For example, the present cohort of elders has had limited experience in planning and leading their own programs, in being discussion leaders, in presenting content and in seeking out resources to aid in their own programming. What are you doing to teach these skills?

6) We shouldn't forget that having fun is important to older adults. Adult educators can help make learning fun for all ages. Don't take yourselves too seriously.

AN EVALUATION MODEL FOR AN INTERVENTION IN A COMMUNITY HOSPITAL

Therese G. Lawler, R.N., Ed.D.
East Carolina University School of Nursing

Introduction

The study described in this paper employed a rather unique evaluation model which measured change on multiple levels within a community hospital. That change was both planned and prescribed and was brought about through an educational intervention of one year's duration aimed at enhancing management skills. The tri-part effect of the intervention or program was analyzed on individual, group, and organizational levels. It is that evaluative process and methodology which is explicated in this presentation.

Problem

We now live in a rapidly changing technological and social milieu, the predicted era of Toffler's Future Shock. To keep current in knowledge and skills is imperative, especially for persons engaged in those practice disciplines which involve the delivery of human services. This need for the maintenance of competence is what Houle calls the "crisis of the professionals."[1] Efforts to meet this broad need have defined the study and practice of the emerging field of continuing professional education.

An increasing number of adult educators are thus becoming involved in continuing professional education. In the health field, their roles include in-service training, staff development education, human resource developers, programmers for professional societies and health science specialists in university continuing education. Since these educators act as change agents, it is incumbent on them to provide relevant, accessible, and effective programming for the consumers. Programming, as such, needs to be aimed at facilitating change in the individual, the group, and the organization. How best to accomplish this change-oriented goal remains problematic since the theory base of adult education is still developing. Also, how best to evaluate their endeavors is often difficult to ascertain, since evaluation research has been long thought of as methodological step-child. The state of its art is just beginning to come into its own.

Purpose

This research study was a chronicle of planned change and was therefore specifically directed to:

1. Trace the design and implementation of an integrated educational model for intervention in a community hospital setting.

2. Identify and evaluate the effects of the intervention-

Address of Author:
School of Nursing, Room 158
East Carolina University
Greenville, N.C. 27834

that is, to compare the expected outcomes to the actual outcomes.

3. Examine the perceived cogency of the change intervention.

Conceptual Framework

The theory base supporting this study relies on the concepts of intervention, programming, client system and change agent as well as on those relating to planned change, adult learning, organizational development, and evaluation.

In the conceptual framework of this study, change is perceived in Lewin's schema of unfreezing behaviors, learning alternate ways of thinking, doing and feeling, and then refreezing in new select behaviors. Bennis and Schein too provide a cogent and useful theory of change. Assumptions inherent in their model derive from social psychology and picture planned change as more acceptable than imposed change.[2]

Adult learning or andragogy is viewed from the Knowlesian paradigm that is predicated on felt needs, and is problem-centered and learner-oriented.[3] The concept of learning embraced in this study also incorporates the classic curriculum model of Tyler and suppositions from Houle's description of the continuing education process.[4]

Organizational development (OD) is seen from Lawrence and Lorsch's frame of reference in which OD is defined as "ways to change to organization from its current state to a better developed state."[5] Programming is used as Boone-Shearon-Dolan describe it and refers to the application of the theory to a working educational model for continued learning for the professions.

Evaluation is approached as an integral component of the programming process in continuing education. As defined by Houle, evaluation is an appraisal of program quality entailing measurement of the results of formal educational activity, assessment of the extent and calibre of the developed ability of individual practitioners as a result of study and an estimation of the level of performance of a professional group. Houle's model is derived from the academic perspective with some similarities to the Shufflebeam paradigm.[6]

The literature search reveals that there have been few studies attempted which deal with testing models designed to effect change in health care institutions. Most research has focused on the difficulty encountered in trying to alter behavior of professionals and on the peculiar nature of the health organization. It seems that scant attention has been paid to "how" change is perceived to occur.

Methodology

The quasi-experimental design of the study integrates a time-series evaluation method into the chronicling of the change process at Summit hospital. Time-series is defined by McCleary and Hay as a set of "N time ordered observations of a process." In this sense, it is a type of longitudinal research which generally studies changes in social phenomena over time.[7] Therefore time-series are more appropriate for gauging incremental rather than structural change. Gene Glass et al (1975) characterize time-series designs as a variation of the pretest-posttest experiment with repeated observations of an outcome variable.[8]

In the behavioral sciences, time-series design provides a mechanism for the comparative study of the complex effect of an intervention in a social organization. Immediacy, duration, and changing character of the effect or an intervention or treatment are measured in a time-series so that an "effect pattern" or shift emerges.[9] The essence of the time-series design, according to Campbell and Stanley, is "the presence of a periodic measurement process" which results in an effect or outcome pattern.[10] Threats to internal validity in the use of time-series arise from other plausible competing hypotheses which may offer likely explanations for the effect pattern or shift other than the treatment or intervention. This type of validity concerns history or the effect of current events, i.e. extraneous variables between time 1 and time n (before and after.) External validity also may be compromised in a time-series design by the interaction effect of testing; that is, the pretest itself alters the respondents' or participants' sensitivity to the interaction, making their reactions different from an unpretested population. However, this sort of methodology carries fewer hazards to validity that any other design except the true experiment and the Solomon Four-Group design.[11]

To illustrate the application of the case study and time-series design to the 18 months of program and evaluation at Summit Hospital, see Figure 1.

Figure 1: Relationship of Time-Series Observations and Intervention at Summit Hospital between September 1979 & February 1981

Phase I	Phase II	Phase III	Phase IV		
X_a	X_b	X_c	X_d		
0		0	0	0	0
T1	T	2 T	3 T	4	T 5

Time
(1979) (1981)

The nature of the intervention (displayed as $X_a \rightarrow X^d$) is described as a consultation or change effort with four distinct phases. During the different educational activities or phases the author and her colleague spent one to two days per week in Summit from late August 1979 through December. After that period the author spent from one to two days per month with the management team until August 1980 and returned for a two day follow-up in February 1981.

Sample

Subjects of this study were all members of the management team from Summit Community Hospital in western North Carolina and thus constitute a population.

Included on the team were three administrators, one administrative assistant, 16 department heads and 16 supervisors - thirty-six in all. Certainly they could be characterized as a rather heterogeneous group since departmental representation ranged from maintenance to nursing, with educational preparations distributed from master's level to high school equivalency. Ages spanned the early twenties to the early sixties. In the sample were 11 males and 25 females and all were of the white race or white mixed with some Indian.

Data Collection and Instrumentation

Variables which were measured in the evaluation research are those relating to change (as the dependent variable) on the individual, group and organizational levels. Indicators which were selected for individual change relate to managerial and interpersonal skills specifically tied to the learning objectives of the program and the competencies which support each of those objectives. In all, 39 behaviors or competencies were extrapolated and measured.

Group indicators of change centered on team effectiveness or development and on leadership style or organizational climate as viewed by the program participants. The selected measure of positive group changes is how the participants view the organizational climate. A more collaborative/participative climate or leadership style in a highly specialized and role differentiated institution has been documented in the literature to be appropriate and indicative of managerial effectiveness. Group perception of climate was measured in the time-series.

The last variables relating to change are those which describe organizational effectiveness. Three measures which were selected as descriptive since they are rather classically employed in other studies of hospitals: attrition rate, system adaptations, and Joint Commission on the Accreditation of Hospitals (JCAH) compliance. Attrition rates are considered to be prime indicators of job satisfaction in the health care disciplines.

A second determinant, system adaptation, is classified as a social indicator of productivity. Adaptation to systems alterations is traced over a year and a half at Summit Hospital, again by anecdotal recordings of the processes. Significant changes in protocols, departmental policies, organizational hierarchy and role realignments were noted with reactions from those closely involved including a contrast of organizational receptivity.

The final indicator of organizational effectiveness is the degree of compliance to the accreditation standards promulgated by JCAH. For the purposes of this research, the 1979 and 1981 JCAH visits to Summit were contrasted and differences were analyzed to support a judgement of the status of organizational health. Theoretically the outcomes from JCAH evaluation should reconcile with both the ability of a hospital to retain its employees and its ability to deal with systems alterations. Favorable outcomes also reflect the collaborative nature of the organizational climate since the standards specifically address participative management.

Change was measured by a time-series mode utilizing a pre, interim, post and two follow-up measurements at times 1, 2, 3, 4, and 5.

The tools applied in the evaluation of the effectiveness of the program were: (1) A competency scale derived from the learning objectives of the intervention (to assess individual behavior change). (2) An organizational climate scale adapted from Rensis Likert's seminal organizational studies which weighs six institutional variables (to assess the shift from authoritarian to participative climate). Data concerning the organizational variables were collected before and after and supported by anecdotal notes. Appropriate descriptive statistical treatments were applied to the data and the t-test for paired samples was used to demonstrate any significant differences before and after the intervention. Data were entered into the LERTAP and SPSS computer programs for analysis.

Results

Findings from this study are congruent with the predictions set forth in the research hypotheses. Change indeed appears to have been effected on the individual, group and organizational levels. On an individual level a significant difference ($p < .01$) was found using the t-test for dependent samples in the mean scores on a management competency scale for all members of the leadership team at Summit Hospital. Measures were taken before, during and after implementation of the development program. Change was incremental across time and the greatest differences were found in problem solving skills, communication techniques and the constructive use of group process. Because the competencies were based on the six program objectives, their mastery equates an overall achievement of those learning objectives.

At the group level, change was evidenced by the shift toward a more open and participative organizational climate as measured in time-series by the Likert OCS. Mean scores on seven subscales increased most markedly on scale 2 (motivational forces), scale 3 (communications) and scale 5 (decision making). The perception of group change was held constant when measured six months after completion of the program.

Indicators of organizational effectiveness, which were hospital attrition rate, systems adaptations and compliance to JCAH evaluation criteria, gave evidence of desired change at the organizational level. Data retrieved on attrition rates showed a decline from 35% to 14.8% in the years 1978-1981. This last figure compared most favorably to the 1980 statistic on nursing turnover in North Carolina which ran at 22%.

Systems adaptation was measured by documented major alterations in computer programming pharmacy services, nurse-physician relationships and organizational hierarchy restructuring over a year's period. Anecdotal materials supplied the evidence in these instances to support the contention of positive change.

Before and after (1979 & 1981) measures of compliance to JCAH standards were contrasted as the final organizational indicator. There were 34% fewer conditional recommendations made by the evaluation team in 1981. Omitting medical staff violations, the improvement rate was 44%.

Conclusions and Implications

On the face of it all the educational intervention appears to have been a success.

Implementation of the program utilized strategies derived from a melding of adult educational principles and an organizational development approach. The synergistic combination of this two-faceted model seemed to allow for impact on both organizational structure and process. Results point to the favorable effect of the program impinging on not only human processesual systems but technostructural systems as well. This seems to affirm Kahn's contention that when programming is neither packaged nor haphazard but instead uses selected strategies from a sound theoretical base the treatment produces more desirable organizational outcomes.

Implications for further research endeavors flow from the finding. There certainly remain many areas to empirically address. Among these are:

1. There needs to be a shift from an exploratory to explanatory focus in ascertaining why change occurs through learning.
2. The tools used in this study call for further testing.
3. More rigorous studies should follow which measure the impact of continuing professional education on practice.
4. Staff development programming should be subjected to more systematic and strenuous evaluation.

Generally, there is apparent a real need for more and better applied research endeavors in continuing education for the health professionals. Well conducted and rigorous studies will enable educators to confirm and add to the body of knowledge which is developing to undergird practice in this specialty.

References

1. Houle, Cyril. Continuing Learning in the Professions. San Francisco, Josey-Bass Publishers, 1980, pp. 7-15.

2. Bennis, W. and E. Schein. "Group Change?" in the Planning of Change. New York, Holt, Rinehart and Winston, 1961.

3. Knowles, Malcolm. The Modern Practice of Adult Education. New York, Association Press, 1970, p. 25.

4. Tyler, Ralph. Basic Principles of Curriculum and Instruction. Chicago, University of Chicago Press, 1949, p. 4.

5. Lawrence, Paul and Jay Lorsch. Developing Organizations: Diagnosis and Action. Reading, Massachusetts, Addison-Wesley Press, 1969, pp. 2-38.

6. Houle. Continuing Learning, pp. 15-20.

7. McCleary, Richard and R. Hay. Applied Time Series Analysis for the Social Sciences. Beverly Hills, Calif., Sage Publications, 1980, pp. 20-23.

8. Glass, Gene, Victor Willson and John Gottman. Design and Analysis of Time Series Experiments. Boulder, Colorado, Associated University Press, 1975, pp. 2-8.

9. Campbell, Donald and Julian Stanley. Experimental and Quasi Experimental Designs for Research. Chicago, Rand McNally Pub. Co., 1963, pp. 37-39.

10. Ibid.

11. Glass, et al., Design and Analysis, pp. 71-85.

Manpower Training and Disadvantaged Adults: An Assessment of Participants' Economic and Social Development[1]

Janet H. Lawrence[2]
School of Education
University of Michigan

Increasingly, questions about the cost effectiveness of basic skill and manpower programs are being raised in the public sector (Malone and Flowers, 1980). The emphasis on economic outcomes can be explained in part by the legislative history of adult basic education in the United States (Dorland, 1978; Malone & Flowers, 1980). It may also be attributed to a lack of consensus regarding the general goal of adult literary programs; the debate about whether programs should be machanisms for assimilating people into the cultural mainstream or a means for fostering political plurality and cultural diversity is ongoing (Freire, 1970). Finally, the focus may result because of the tendency for social development, humanistic, and economic outcomes to be interdependent. However, if adult educators are to make a strong case for the use of non-economic social development indicators as measures of program success, they must begin to specify and assess individual growth along these dimensions. The study reported here represents a preliminaty step toward this goal.

The purpose of this investigation was to measure the impact of community-based pre-employment training on male corrections clients. The program selected for study was the Collaborative on Offender Training and Employment (COTE), a project designed to help undereducated and underemployed men acquire unsubsidized jobs and make the transition from prison to community life.

Rationale

The interrelationships among education, employment, and criminal behavior have been examined by social scientists and policy analysts. The data from several studies point to an overall direct relationship between crime and employment rates (Fleisher, 1966) and an inverse relationship between education and criminal behavior (Pownall, 1969). Researchers have also found that pre-commitment employment status is a reliable predictor of post-release employment (Pownall, 1969). In spite of the fact that the correlations among these variables are well documented, the question about when and where to intervene in this triad remains unresolved.

Project COTE is built on the premise that one optimal time to intercede is immediately following a client's release from prison to community corrections centers. The rationale is that during this period the man's motivation to learn may be intensified, there are opportunities for direct application of newly acquired knowledge and skills, and successful application can result in immediate rewards, i.e., fewer social restrictions.

---

[1] The research was supported in part by a grant from the Michigan Department of Labor. However, the opinions expressed herein do not necessarily reflect the policy of position of the Department.

[2] Reprints of the complete paper may be obtained from Janet H. Lawrence, 2014M School of Education, The University of Michigan, Ann Arbor, MI 48109.

COTE is an intensive three-week training program that combines classroom instruction with supervised job search. The basic skills curriculum focuses primarily on employment-related objectives--students identify their aptitudes and interests, and match them with occupational groups, learn how to find and keep a job, and how to acquire technical skill training. It also includes life skills that prior research indicated were important to corrections clients as they adapted to life outside prison (Lawrence and Dyer, 1979).

Method

A quasi-experimental design (Campbell and Stanley, 1963) was used to measure the relative effects of training and other independent variables on the prisoners. Over a six-month period (July-December 1980), all male residents of Michigan state prisons who were released to community corrections centers in Metro Detroit were randomly assigned to experimental and control groups. Experimental subjects (N = 148) completed COTE and Control subjects (N = 209) participated in only the regular center activities.

Data from Michigan Department of Corrections (MDC) institutional files were used to develop indices of subjects' cognitive skill levels, corrections records, employment histories, education, family background, and health status. Six months after the first group of subjects completed COTE, data on all 357 subjects' employment and corrections status were gathered from MDC field service files. The follow-up was timed to coincide with what the research and experience suggest is a critical point in the post-release adjustment process. It appears that those persons who are not returned to prison during this time have a good chance of "making it" in terms of employment and recidivism (Pownall, 1969).

Using this research design, the investigator was able to examine differences between (a) all men who had made successful transitions and those who had failed, and (b) COTE participants and other men released to the same community at the same points in time.

Data Analysis

Discrepancy analyses were used to assess the separate and cumulative impact of eleven independent variables on the economic and social development of the subjects. Ten of the variables were defined through factor analysis of the institutional file data; the eleventh variable was COTE participation.

Several operational definitions of the dependent variables were developed. Economic development was defined as movement from an unemployed status toward self-sufficiency and three levels of success were specified: unemployed, employed--cash reimbursement, and employed--regular paycheck. Social development was taken to be increased independence from corrections supervision and four categories of custory were established to represent the full continuum: in custory for new offense or escaped, corrections center resident, furlough, and parole.

In one data analysis, economic and social development were treated as separate outcomes. In a second, employment and corrections data were combined to form four experimental outcome groups: positive employment/positive corrections, negative employment/positive corrections, positive employment/negative corrections, and negative employment/negative corrections. The men who were classified as positive employment were those who were working and receiving paychecks; those coded as negative employment were unemployed. The men in the positive corrections category were residents in corrections centers, on furlough or parole status; those cases considered negative corrections were men who were either in custody or had escaped.

Findings

The data suggest that COTE had a greater positive impact on the men's corrections status than on their employment record; 71.6% of COTE participants fell into the Positive Corrections Group as compared with 60.3% of the control subjects. At the time of the second data collection, 35.4% of the control and 31.1% of the COTE subjects were employed (see Table I).

When the employment and corrections data were combined and the four experimental outcome groups were established, about the same portion of the COTE and control subjects were in each one. The biggest differences between the two groups were in the Negative Employment/Positive Corrections and the Negative Employment/Negative Corrections Groups (see Table II).

The discrepancy analysis was used along with an analysis of variance in order to develop some preliminary generalizations about who is more likely to benefit from training such as COTE. Several of the conclusions from previous studies were corroborated; the men's precommitment employment, substance abuse and overall corrections records were strongest determinants of their placement in both the separate and combined outcome groups. It appears that men who had served longer sentences and who had little or no employment background benefitted most from COTE.

Discussion

The encouraging findings are that it is possible to separate out social development indicators and to measure growth, and an intensive three-week program can have an enduring impact on participants. The discouraging aspect of the project is not unique to COTE; these men have little or no social support after the brief training ends. This was a first step toward the goal of defining "entrance requirements," characteristics that seem to describe men who need COTE the most, and the findings suggest it is a productive research effort.

References

Campbell, A. and Stanley. Experimental and Quasi-Experimental Designs for Research. Chicago: Rand, McNally, 1963.

Dorland, J. R. A national focus on competency-based adult education. In Kasworm and Lyle (Eds.), Proceedings of a National Invitational Workshop on Competency-Based Adult Education. June 20-22, 1978, Austin, Texas.

Fleisher, B. M. The Economics of Delinquency. Chicago: Quadrangle Books, 1966.

Freire, P. Pedagogy of the Oppressed. New York: Herder and Herder, 1970.

Lawrence, J. and Dyer, B. Life Skills for Adult Offenders, Final Report. ADELL Clearinghouse, July 1979.

Malone, V. M. and Flowers, W. L., Jr. Education for economic and social development. In Boone, Shearon, White (Eds.), Serving Personal and Community Needs Through Adult Education. San Francisco: Jossey-Bass Publishers, 1980. p. 129-146.

Pownall, G. A. Employment Problems of Released Prisoners. Report prepared for the Manpower Administration, U. S. Department of Labor, 1969.

TABLE I
Distribution of Subjects by
Employment and Corrections Outcomes

	Employment		Corrections	
	Positive	Negative	Positive	Negative
COTE (N=148)	46(31.1)	97(65.5)	106(71.6)	37(25.0)
CONTROL (N=209)	74(35.4)	128(61.2)	126(60.3)	76(36.4)
TOTAL (N=345)	120(33.6)	225(63.0)	232(64.9)	113(31.7)

Note: A total of 12 subjects were coded neutral because they were working but not receiving paychecks or they had been transferred from the region, discharged or killed.

TABLE II
Distribution of Subjects
by
Experimental Outcome Groups

Experimental Groups

	Positive Employment Positive Corrections	Positive Employment Negative Corrections	Negative Employment Positive Corrections	Negative Employment Negative Corrections
COTE (N=148)	41(27.7)	5(3.37)	65(43.9)	32(21.6)
CONTROL (N=209)	63(30.1)	11(5.26)	63(30.1)	65(31.1)
TOTAL (N=345)	104(29.1)	16(4.5)	128(35.9)	97(27.2)

Note: A total of 12 subjects were coded neutral.

A Detailed Analysis of GED Examinee and High School Senior Performance on the Tests of General Educational Development

Andrew G. Malizio and Douglas R. Whitney[1]
American Council on Education

INTRODUCTION

During the past four decades, the Tests of General Educational Development (GED Tests) have provided more than five million adults who were unable to complete their formal high school studies with the opportunities to (1) qualify for jobs, (2) secure job promotions, (3) undertake postsecondary education and training, and (4) achieve a variety of personal goals, including that of personal satisfaction. Currently, more than 800,000 candidates (including civilians and military personnel) take the GED Tests each year; of these, about 515,000 earn a high school equivalency credential (GEDTS, 1982). Through the GED Testing Service, tests are administered at more than 2,900 locations throughout the United States and Canada to persons who have not graduated from high school and who meet the eligibility requirements set by their state, territory, or province.

The purpose of the analyses reported here was to compare and contrast the performance of graduating high school seniors, GED examinees, and GED graduates (GED examinees who score at least 35 on each test, and an average score across all five tests of 45) on each of the 22 content areas in the GED Tests. Adult education administrators, teachers, and publishers should find this information useful in planning and developing instructional programs for GED examinees.

Description of the GED Tests

The content of the GED Tests is intended to represent a sample of the expected outcomes of four years of high school instruction. Resulting from high school curriculum reviews, recommendations detailing the content areas to be covered and the relative emphasis within each subject area for the current GED Tests were determined. The current tests were developed by the Educational Testing Service. The GED Test battery contains a total of 290 items in five subject area tests: Writing Skills (80 items), Social Studies (60 items), Science (60 items), Reading Skills (40 items), and Mathematics (50 items). The tests contain questions requiring use of concepts, general knowledge, and thinking skills. There are few questions about isolated details, definitions, or specific facts. The GED Tests measure, among other things, the ability to use information rather than to remember details. For each item, examinees are asked to select the best answer from among five alternatives. The content areas covered in each test of the GED battery are shown in Table 1. The items cover a wide range of subjects and vary in difficulty from easy to difficult. Patience and Whitney (1982) present a detailed description of the content of the GED Tests in *What Do the GED Tests Measure?*

---

[1] Additional information and/or copies of the full report are available from either author at American Council on Education, One Dupont Circle NW Suite 20, Washington D.C. 20036.

METHOD

Calculation of Content Area Mean Percent Correct Values

Results of (1) a national norming studying involving the administration of the GED Tests to a representative sample of U.S. graduating high school seniors and (2) a national survey of approximately 13,000 adult examinees provided the item data for the analyses reported here. All discussions and inferences presented in the detailed comparisons of the GED Test content area performance of graduating high school seniors and GED examinees are based on the mean percent correct scores (i.e., mean item difficulties or mean p-values) for content areas contained on the GED Tests obtained by the norming and national examinee samples. The mean content area p-values, standard deviations, and standard errors of the mean p-values were obtained separately for graduating seniors and GED examinees as follows:

1) Item p-values (percent correct) were calculated for each of 290 items on nine forms of the GED Tests separately for seniors and examinees. This resulted in 2610 item p-values for each group-a total of 5220 p-values.

2) The mean of all items that compose a given content area was computed by summing the p-values across all forms separately by group. For example, p-values for Writing Skills test items 1-10 (spelling) across all forms were summed. This summed value was then divided by the total number of items contained in a given content area (e.g., 90) to obtain the mean p-value for spelling items. Identical procedures were followed for each content area.

3) Standard deviations of the mean p-value for each content area were calculated separately by group. Standard errors of each mean p-value were calculated by dividing the standard deviations by the square root of the number of items in each respective content area. These standard errors were then used in calculating 99% confidence intervals for each mean p-value. If the mean p-value confidence intervals between two content area groups overlap, the performance differences between the groups were not statistically significant.

RESULTS

Content Area Group Performance

To develop the differences between senior/examinee test performance analyses were conducted for each of the 22 content areas in the GED battery. The mean p-value represents the average percent correct on all items of a given content area. The number of items contained in each content area and the mean p-values are presented in Table 1.

When comparing group performances on the GED Tests, it is important to note that any given test represents a sample of possible items that may have been used to measure achievement in a particular content area and major subject area. In constructing the GED Tests, items are permitted to vary somewhat in difficulty from one content area to another. Therefore, when study results indicate that, for a sample of examinees, one set of items (e.g., biology items) is more difficult than another (e.g., earth science items) within a particular test, it should not be concluded that the group was "less prepared" in the former area. Another set of items may have produced different results. For this reason, percent correct values (i.e., p-values) can be used to compare the achievement of two groups, but not to compare the achievement levels of a single group on two content areas.

The overall performances of both groups only differed slightly. Graduating high school seniors correctly answered an average of six more Writing Skills items, four more Mathematics items, two more Social Studies items, and one more Science item than did GED examinees. Both groups correctly answered approximately the same number of Reading Skills items.

In order to better understand the differences in overall performance, average percent-correct values for content areas within each of the GED Tests were examined. Graduating seniors earned higher scores than did GED examinees in all content areas except drama and prose literature. Although differences do exist and the pattern of performance is consistent (i.e., seniors perform better than GED examinees) the magnitude of the actual differences is very small. The differences in mean percent correct between the two groups for drama and prose literature was less than 1% (see Table 1). Further, the overall rank order (of the mean content area p-values) correlation coefficient was .83. This suggests that content areas that tended to be difficult for seniors also tended to be difficult for GED examinees; likewise, those areas that were less difficult for seniors (as a group) also tended to be less difficult for examinees. The most difficult content areas (i.e., types of items) for both groups were chemistry and algebra items. The least difficult types of items for both groups were practical reading, drama, and general reading items.

Writing Skills. In general, those Writing Skills content areas which were more difficult for seniors also tended to be more difficult for GED examinees Overall performance differences ranged from six to nine percent. The most difficult item type for both groups was Logic and Organization. The least difficult content areas for both groups were Spelling and Sentence Correction. Estimated confidence intervals about the mean content area p-values (i.e., percent correct) for the two groups are shown in Table 2. If the confidence intervals overlap (e.g., Spelling,and Logic and Organization), the differences between the groups are not statistically significant ($p > .01$). For example, the confidence intervals for the Spelling content areas for graduating seniors and GED examinees were 58-68%, and 50-59%, respectively. Thus, the differences were not statistically significant. However, graduating seniors outperformed GED examinees in Capitalization and Punctuation, Usage, and Sentence Correction ($p < .01$). Statistically significant differences do not exist, despite apparent large differences in mean p-values, for most content areas. This results from a number of factors including within-group variability of ability, as well as the number of items contained within each content area. In addition, a statistically significant difference may actually represent only a 1-2 item difference on a given test. Results indicated that seniors correctly answered about 1-2 more items (within a Writing Skills content area) than did GED examinees.

Social Studies. In contrast to the similarity in overall performance on the other GED Tests, the least difficult type of social studies items for graduating high school seniors was the most difficult for GED examinees. As a group, seniors correctly answered approximately 61% of the U.S. History items. GED examinees correctly answered about 56% of the items.

Differences between senior and examinees in mean content area p-values for the Social Studies test ranged from three to five percent, and were not statistically significant. For example, the confidence intervals for the Behavioral

TABLE 1. Mean Percent of Items Correctly Answered by Graduating High School Seniors, GED Examinees, and GED Graduates.[1]

Content Area	No. Items[2]	Graduating Seniors		GED Examinees		GED Graduates	
		Mean	SD	Mean	SD	Mean	SD
Writing Skills							
Spelling	90	63	17	54	18	61	18
Capitl. & Punctuation	90	59	17	47	17	53	19
Usage	216	57	17	50	18	58+	19
Sentence Correction	216	61	15	55	15	65+	16
Logic & Organization	108	53	12	47	12	56+	14
Social Studies							
Economics	105	60	15	57	18	66+	18
Geography	86	59	15	56	17	65+	18
Political Science	110	60	17	57	17	65+	18
U.S. History	134	61	17	56	18	65+	19
Behavioral Science	105	61	13	56	15	66+	16
Science							
Biology	262	58	17	56	20	65+	21
Earth Science	111	56	15	55	19	65+	21
Chemistry	85	46	15	43	19	50+	22
Physics	82	54	14	51	18	59+	20
Reading Skills							
Practical Reading	54	73	17	69	15	79+	16
General Reading	113	65	14	64	17	75+	16
Prose Literature	103	63	16	64	17	74+	17
Poetry	45	60	15	58	15	69+	17
Drama	45	66	15	67	14	76+	15
Mathematics							
Arithmetic	251	63	20	59	23	68+	24
Geometry	91	57	21	48	24	56	26
Algebra	108	49	19	34	18	39	21

[1] Percent correct values for GED examinee data based on item data from a 30% random sample of examinees participating in the 1980 National Survey. Percent correct values for GED graduates are based on a subset of the GED examinee sample (i.e., those examinees who earned a minimum of 35 on each test and an average 45 across all five GED Tests). Values followed by a plus sign (+) represent areas where GED graduates outperformed graduating seniors.

[2] Number of items on nine forms of the GED battery that were used in these analyses. All available forms that had data for both groups were included in the analyses.

TABLE 2. Mean Content Area Confidence Intervals.[1]

Content Area	Graduating Seniors	GED Examinees	GED Graduates[2]
Writing Skills			
Spelling	58-68	50-59	57-66
Capitl. & Punctuation	54-64	42-52	48-58
Usage	54-60	47-53	54-61
Sentence Correction	59-64	53-58	62-68
Logic & Organization	50-57	44-50	52-59
Social Studies			
Economics	56-64	52-61	61-71
Geography	55-63	51-61	60-70
Political Science	56-64	53-61	62-71
U.S. History	57-65	52-60	61-70
Behavioral Science	57-64	52-60	62-70
Science			
Biology	56-61	53-59	61-68
Earth Science	53-60	50-60	60-70
Chemistry	41-50	38-48	44-57
Physics	50-58	46-56	53-65
Reading Skills			
Practical Reading	68-79	63-75	73-85
General Reading	62-69	60-68	71-79
Prose Literature	59-67	60-68	70-79
Poetry	55-66	51-64	63-76
Drama	60-71	60-73	71-82
Mathematics			
Arithmetic	60-66	55-63	64-72
Geometry	51-63	42-55	49-63
Algebra	44-53	29-38	34-44

[1] These values represent estimated 99% confidence intervals and were calculated by multiplying the standard error of each mean p-value by 2.58. For example, on a given Writing Skills test, graduating high school seniors probably would answer correctly an average of 58-68% of the spelling items; GED examinees an average of 50-59%; GED graduates, 57-66%.

[2] Based on GED examinees who earned standard scores of at least 35 on each GED Test and an average standard score of at least 45 on all five tests in the GED battery.

© 1982 American Council on Education

Reprinted with the permission of the publisher

BEST COPY AVAILABLE

Science items for graduating seniors and GED examinees were 57-64% and 52-60% respectively. Graduating seniors correctly answered approximately 1 more item (within a Social Studies content area) than did GED examinees.

Science. In general, content areas which were more difficult for seniors also tended to be more difficult for examinees. Overall performance differences ranged from one to three percent. Chemistry items were the most difficult for both high school seniors and GED examinees. The least difficult area for both groups was Biology.

Performance differences between graduating seniors and GED examinees were not statistically significant. For example, the estimated confidence intervals for Earth Science items were 53-60% for graduating seniors and 50-60% for GED examinees. Graduating seniors and GED examinees correctly answered approximately the same number of items within a specific content area with the exception of Biology. On average, seniors correctly answered approximately one more item within the Biology content area.

Reading Skills. Content areas that were more difficult for seniors, also tended to be more difficult for GED examinees. Overall performance differences ranged from one to four percent. The most difficult item type for both groups was Poetry. The least difficult content area for both groups was Practical Reading.

Differences between graduating seniors and GED examinees were not statistically significant. Both groups correctly answered approximately the same number of items within a specific Reading Skill content area.

Mathematics. Content areas that were more difficult for seniors, were also more difficult for GED examinees. The most difficult item type for both groups was Algebra. Overall performance differences ranged from 4-15 percent. The least difficult content area for both groups was Arithmetic.

Except for Algebra items, differences between graduating seniors and GED examinees on Mathematics content area p-values were not statistically significant. Graduating seniors correctly answered approximately one to four additional items (within a content area) than did GED examinees.

Graduating High School Seniors vs. GED Graduates

To this point, this paper has addressed the performance of GED examinees and graduating seniors sampled in the 1980 studies. A question frequently asked by adult educators, administrators, teachers, admissions officers, and employers is "How do GED 'graduates' compare with graduating high school seniors on the GED Tests?" To address this issue, analyses similar to those noted above were performed using only the item data from examinees who earned a minimum of 35 on each GED Test and an average of 45 across the GED battery. (This is the most widely used current minimum score requirement to earn the high school equivalency credential based on GED Test results.)

These detailed analyses indicated that GED graduates (as a group) outperformed graduating seniors (based on mean content area p-values) in 18 of the 22 content areas contained in the GED battery. Estimated confidence intervals for each group are presented in Table 2. The most notable differences occurred on the Reading Skills test. Differences between GED graduates and graduating seniors were statistically significant in General Reading and Prose Literature. Estimated confidence intervals for the Generall Reading items for GED graduates and graduating seniors were 71-79% and 62-69%, respectively. Estimates for the Prose Literature items for GED graduates and graduating seniors were 70-79% and 62-69%, respectively.

DISCUSSION

Clearly, graduating seniors earned slightly higher scores than did GED examinees in every content area contained on the GED Tests except Drama and Prose Literature. Performance differences on Capitalization and Punctuation, Usage, Sentence Correction, and Algebra were statistically significant. Differences between the two groups showed that, in general, seniors correctly answered one to four additional items per test than did GED examinees. Both groups correctly answered approximately the same number of Reading Skills items.

The purpose of this study was not to provide a formula for adult basic educators that, when applied to their current teaching strategy, would result in more GED examinees passing the GED Tests. However, based on the overall performance of graduating high school seniors and GED examinees, it would seem that the two groups differ most in terms of achievement in Capitalization and Punctuation, Usage, and Sentence Correction on the Writing Skills test, and in Algebra on the Mathematics test. Because graduating high school seniors earned higher scores in each of these four areas, additional or more effective instruction may result in better GED examinee performance. Other factors such as test anxiety may also influence test performance.

Although performance differences between GED examinees and graduating high school seniors were found, they were small. Further, 30% of current graduating high school seniors could not meet state score requirements for the GED Tests. That is, examinees who pass the GED Tests, have demonstrated achievement levels that surpass about 30% of today's graduating high school seniors.

The findings presented here substantiate the Office on Educational Credit and Credentials policy for awarding high school credentials based on the GED Tests. GED graduates (those who "passed" the battery) outperformed the graduating high school seniors in most areas on the battery. The authors believe that persons who meet the state/provincial established minimum score levels for the high school equivalency credential based on GED Test results should be considered high school graduates for the admissions, military, licensing, and employment purposes. Their test results reported here demonstrate this achievement equivalency.

REFERENCES

American Council on Education. College Admissions Policies Toward GED Applicants. Washington, D.C.: Office on Educational Credit and Credentials, 1982.

General Educational Development Testing Service. The Official GED Practice Tests. Washington, D.C.: American Council on Education, 1979 (Available from Cambridge, The Adult Education Company, 888 Seventh Avenue, New York, NY 10106).

General Educational Development Testing Service. The 1981 GED Statistical Report. Washington, D.C.: American Council on Education, 1982.

General Educational Development Testing Service. Examiner's manual for the Tests of General Educational Development. Washington, D.C.: American Council on Education, 1981.

Malizio, A. G., & Whitney, D. R. Who takes the GED tests? A national survey of spring 1980 examinees. (GED Testing Service, Research Studies, No. 1) Washington, D.C.: American Council on Education, 1981.

Patience, W. M., & Whitney, D. R. What do the GED tests measure? Washington, D.C.: American Council on Education, 1982 (Available from Contemporary Books, Inc. 180 North Michigan Avenue, Chicago, IL 60601).

Spille, H. A. The 1980 Norming of the GED Tests. (GED Testing Service Memorandum, No. 15) Washington, D.C.: American Council on Education, 1981.

insert tables here

I. USE AND UTILITY OF INFORMATION CHANNELS FOR SELF-HELP ADVOCACY GROUPS

by

Elaine Kathryn McCreary
University of British Columbia

II. PREAMBLE : PROBING THE CONCEPT OF LEARNING SOCIETY

What is the actual relationship which exists between society and informal learners? Broadly stated, the purpose of this research was to conceptualize that relationship and to obtain empirical evidence of how informal learners make use of society's learning resources.

Within adult education several pivotal concepts shape our image of society and the learning taking place within it. In the same way that the concept of "lifelong learning" expanded the time-line on adult learning, "learning society" expands the institutional contexts in which one can expect adult learning to take place. "Learning society" suggests that every social entity whether for production, consumption, administration, worship, healing, or recreation potentially could include among its functions some measure of educational benefit for its employees, clients, constituents, parishoners, patients, or members. Conversely, this concept suggests that the many individuals who are engaged in "personally conducted learning" can look out upon a society filled with innumerable potential resources for their learning. The idealized relationship between informal learners and their society is a "learning network", a set of resource contacts (which may be interconnected to some degree) that learners establish to support their learning goals. The "learning projects" line of research included some empirical investigation of how individual learners acquire information and advice. But the same kind of attention has not been given to groups created by adults who share common and compelling reasons to learn.

The group setting of informal learners is an important one for adult educators to attend to if they value the principle of "innovative learning". The Club of Rome report entitled, "No Limits To Learning" defined this concept as learner anticipation of future conditions, and genuine participation in the creation of knowledge. They also pointed out that comparing the spheres of governmental, intergovernmental, and non-governmental organizations, it tends to be the latter which embody these operating principles (Botkin, Elmandjra and Malitza, 1970: 80). If that is so, the best possible setting in which to observe innovative learning in action is the very one which has been least studied -- groups of adults who create knowledge together about anticipated conditions as a natural function of their grappling with life and society. For this reason, self-help advocacy groups were chosen as a prime site in which to measure the use of society's resources by informal learners. "Self-help" denotes that those involved in such a group are directly affected by the problem or issue which brought the group together. "Social advocacy" distinguishes them from other forms of self-help directed more towards personal therapy (Katz & Bender, 1974).

Copies of the descriptive and inferential statistics supporting conclusions will be available from: Elaine K. McCreary, Division of Adult Education,
Dept. of Administrative, Adult & Higher Education,
U.B.C., Vancouver, British Columbia, CANADA V6T 1N7

III. INTERDISCIPLINARY LITERATURE

Conceptualization of the study made use of contributions from the literature of social change, information science and social networks.

Management of extensive social change was made the subject of operational analysis by a British team (Friend & Jessop, 1969) who found that decision-making groups are required to make "robust" strategic choices (those leaving the greatest number of alternatives open in the future) which in turn, requires them to reduce as far as possible the uncertainties inherent in the decision-making process. They found that the many sources of uncertainty subsumed under the headings of i) nature of the problematic situation; ii) values which lead to policy regarding it; and iii) overlap with other decision-making entities party to the situation. These findings later pointed the way to defining generic types of information required by advocacy groups. In order to reduce decision-making uncertainties such groups have to become their own educators, reaching out into society for whatever assistance they can get, wherever they can get it. They become of necessity users of information.

Research on information flow relates three elements: the user, the information, and the channel which links the two. Use studies focus on the channel, asking who uses it, and for what information; dissemination studies focus on a particular kind of information, and ask to whom it travels, via what channels; user studies focus on the kind of user, and ask what channels they use, for what kinds of information (Kunz,Rittel & Schwuchow, 1977). The latter approach provides a way of focusing on informal learning groups and asking what contacts they use in society to collect what kinds of information. What pattern does their information acquiring take on?

Social scientists have come to realize that the concept of "social network" is proving to be as fruitful a heuristic device as "class" and "role" have been (Mitchell, 1969). Many behaviours have been studied using this approach ranging from political influence, to personal support, financial transactions and information flow. Network characteristics like "density" and "linkage-distances" are becoming familiar concepts. But network studies follow a variety of formats depending upon the combination of characteristics which express the problem at hand. An investigation of groups of informal learners reaching out into society for learning resources touches on the structural characteristics of network size, composition and anchorage; and the interactional characteristics of type, amount, and utility.

Thus the original broadly stated purpose of studying how informal learners make use of society's learning resources was reformulated using network interaction, information user studies, and uncertainty-reducing kinds of information. The specific purpose became how to assess the quantity and quality (use and utility) of interaction which takes place between informal learners, here represented by self-help advocacy groups, and the learning society, represented by categories of social contact which potentially could serve as channels for the various kinds of information which they need to acquire.

IV. METHODOLOGY

In the early stages it was necessary to examine the political sociology of self-help groups and distinguish them from other forms of social activism such as pressure groups (with whom they may share the special function of interest articulation), and social movements (with whom they may share a critique of social values at the intellectual level). Once the subject domain was bounded, the whole function of learning within the group was examined and a distinction made between objects of learning external to the group (the immediate problem-situation, and the larger socio-economic system) from those internal to it (group management, and personal development). A choice was made to concentrate on the group's externally directed learning activities.

In 1981 a preliminary study was conducted with representatives of three advocacy groups of contrasting size and resources, based on the complementary contributions of exploratory interview, critical incident recall, and survey techniques for auditing large scale communications, as recommended by Goldhaber and Rogers (1978). Interviews and critical incident recall probed all aspects of the group's knowledge development process. From these two procedures it became evident that the information acquisition stage alone provided sufficient subject matter for a survey that would compare behaviours over a larger number of groups. In confining the survey to this focus it was recognized that information is not knowledge. The latter develops out of the former by a long and arduous process (Weiss, 1967). But while adequate information acquisition is only a first phase, it is considered essential to all subsequent analysis, synthesis and application of knowledge by the group. The resulting study was designed to examine the relationship between two channel-use variables and user and information variables.

Dependent variables were selected that would depict the group of informal learners as the anchor point of an information seeking network, and represent the "learning society" around them by 24 categories of social contact which could potentially serve the group as information channels. Here it should be noted that the point of observation is not information "sources", a term which denotes the point of origin. In a user-centred study where the seeker is casting about in society for information as a fisher casts a net into the sea, what matters is not where the desired item came from originally but where it can be reliably caught. For this reason the contact point, the "channel" through which the seeker finds information is preferred over "source" as the point of observation for this study.

1. "Amount of interaction" between channel and user group. This measurement is defined as the estimated amount of information acquired via each channel, rather than number of contacts with it, or hours in contact, since what is of significance in this study is not how people spend their time, but how much they are harvesting from each of their potential information channels. It is a simple measure of quantity of information acquired regardless of whether contact was incidental or intentional, and regardless of whether the information subsequently proved useful or not.

2. "Utility of interaction" between channel and user group. This measurement is defined as the degree of relevance to the group's purposes which information acquired is judged to have. It is an evaluation that users make of the eventual usefulness of what they acquired via a given channel.

Independent variables were selected on the basis of results from the preliminary study in the absence of any available research which could be taken as a direct precedent. When asked about the use and utility of information channels subjects in the preliminary study tended to reply that it depends upon "who is looking, and what they are looking for". Consequently, distinctions were drawn within the population of information users being observed, and within the pool of information items being acquired.

1. "Type of user group" classifies advocacy groups as users of information into three categories according to their substantive concern, that is the main issues around which they are organized.

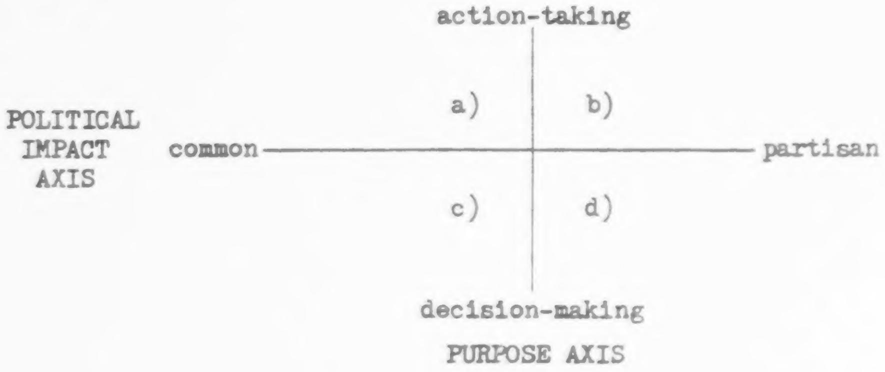
a) Economic issues. This category includes any issues directly related to income, taxation, and essential expenditures on items such as food, shelter, transportation and medical care.

b) Environmental issues. This category includes issues related to the conservation and enhancement of both man-made and natural environments.

c) Identity issues. This category includes all issues related to special needs which originate in an identity shared by a distinctive segment of society.

2. "Type of information acquired" is a classification system of generic types of information designed to supercede issue-specific contents. It was developed using two dimensions which characterize the information pools of advocacy groups: the purpose to which an item is applied; and the political impact of the item. The range of purposes reduces at its extremes to either enriching their understanding of their problem situation in order to form an opinion and take a position, or to planning direct action to change that situation. Political impact refers to the degree of accord or discord aroused by an information item. Items at one end of the continuum have a stable, common impact, a meaning agreed upon by all parties; items at the other end have a volatile, partisan impact, and a contentious meaning.

When the two descriptive dimensions are placed at right angles to each other, four constructed types of information item emerge in the quadrants as shown in the following diagram.



The following definitions echo those in the Friend & Jessop study cited earlier and contain terms which were adopted during field testing of the instrument.

a) Common/action-taking. This refers to items on "official procedures" or policy making or implementing, to which all parties are equally subject.

b) Partisan/action-taking. This refers to items of "practical know-how" which result from the actual experience of social involvement.

c) Common/opinion-forming. This refers to items of "general knowledge" which are relevant to the issues, factual items recognized by all parties.

d) Partisan/opinion-forming. This refers to items that influence "group values", be they items related to current incidents, or the ethical standards against which group members make judgements of social conscience.

Design of the study is shown in its essential elements by the doubly-nested data matrix which it forms. Along the vertical axis two measures (x and y) are recorded on each of the 24 potential information channels. Across the vertical axis three types of user group are each asked about the four types of information they acquire.

		TYPE OF USER GROUP											
		A				B				C			
CHANNELS		Information types				Information types				Information types			
Sector	Category	a	b	c	d	a	b	c	d	a	b	c	d
I	1	x	x	x	x								
		y	y	y	y								
⋮	⋮												
V	24												

This design produces 576 data cells [(2x24)(3x4)] but incorporates a minimum of 30 subjects in each cell. The instrument consists of 24 items cast on two five-point Likert-type scales (amount of use, amount of utility) for each of four types of information. The 24 items are categories of potential information channel which represent the following sectors; government; mass print distributors; mass audio-visual distributors; social organizations; and individual persons.

Administration of the instrument involves defining the four types of information, allowing for recall and validation of examples from the group's recent experience, and repeatedly using recognition cues to hold the subjects' attention on one of the types of information at a time as they rate the use and utility of the 24 channels for each of the four kinds of information acquired. Potential subject groups were identified with the help of committee members, consultants from the community, The Greater Vancouver Information and Referral Service, The Vancouver Volunteer Centre, and local media -- the list being screened to conform to the criteria of self-help, stable operation and an area of interest compatible with one of the three group types previously specified. Data collection was designed to require only one session with each of nine groups.

IV. ANALYTIC PROCEDURES

Relating each of the dependent variables to each of the independent variables produces four basic questions:

Q-1 How much information of each type do advocacy groups acquire through interaction with potential channels?
Q-2 Is that altered by group type?
Q-3 How do advocacy groups rate the information they acquire from these channels?
Q-4 Does that alter by type of group?

Descriptive statistics for questions 1 and 3 are obtained in the same manner. A mean is taken of ratings provided by all nine subject groups, the result displayed as a star plot where each radius represents the average interaction score for a channel. Four such star plots are required, one for each type of information acquired. In each case, the top five channels can be rank ordered with a breakdown of scores by type of user group displayed as bar graphs for ease of comparison. Statistics for questions 2 and 4 are also obtained in a like manner. This time the interaction scores for each category of subject group are treated separately, and plotted as a triserial graph which compares the channel-interaction pattern of economic, environmental and identity issue groups regardless of the type of information being acquired.

The predictive ability of type of information acquired to account for variance in either the amount or utility of channel interaction is tested by running four one-way analyses of variance. The predictive ability of type of user group is tested by running a two-way analysis of variance. By using discriminant function analysis, the relative predictive power of the two independent variables can be compared to that of potentially significant mediating demographic and group operation variables.

V. IMPLICATIONS

Should this empirical investigation establish that the interaction between informal learners and the resources of the "learning society" varies systematically by either the type of information being acquired or the type of group to which they belong them: social scientists will have a little more order in their world; adult educators, social change agents and community information managers will be in a better position to counsel their clients; and activist members of the general public will be better able to implement Ralph Nader's axiom:

"Information is the currency of democracy"

VI. REFERENCES

Botkin, J.W.; M. Elmandjra & M. Malitza. No Limits To Learning : Bridging the Human Gap Oxford, New York, Toronto: Pergamon Press, 1979

Friend, J.K. & W.N. Jessop. Local Government and Strategic Choice London: Tavistock Publications, 1969.

Goldhaber, G.M. & D.P. Rogers. Auditing Organizational Communication Systems The I.C.A. Communication Audit Buffalo: State University of N.Y., 1978.

Katz, A.H. & E.I. Bender. The Strength In Us: Self-help in the Modern World New York: New Viewpoints, 1976.

Kunz, W., H.W.J. Rittel & W. Schwuchow. Methods of Analysis and Evaluation of Information Needs Munchen: Verlag Dokumentation, Pub., 1977.

Mitchell, J.C., ed. Social Networks in Urban Situations Manchester University Press, 1969.

Weiss, P. "The Growth of Knowledge" in Manfred Kochen, ed. The Growth of Knowledge: Readings on Organization and Retrieval of Information New York John Wiley and Son, Ltd., 1967.

CULTURE, COGNITION,
AND
ADULT SECOND LANGUAGE LITERACY ACQUISITION

Richard A. Orem
Northern Illinois University*

The study of culture and its influence on cognitive development, and the reverse process of the influence of cognitive development on cultural development, has actively engaged the thinking of modern anthropologists, linguists, psychologists, philosophers, and educators for at least the past 100 years. The fact that there have been no definitive answers to the questions investigated leads to the inevitable conclusion that the interrelationships are complex, with perhaps no definitive answers to the research questions posed so far. From a more pragmatic point of view, a growing number of second language teachers, in particular adult English as a Second Language teachers in North America, are engaging in what many consider to be a futile exercise of trying to teach English language skills to new adult immigrants who not only have neither oral nor literacy skills in their new language, but who lack the requisite literacy skills in a first language often as a result of no prior experience with formal educational activities. Research on the language and cognitive development characteristics of these nonliterate adult learners is virtually nonexistent. Classroom teachers usually have to mainstream these nonliterates into classrooms with literate and much more advanced second language learners. Disparities in progress and achievement between the more and less educated continue to grow at an accelerated pace.

The most common literature to date directed to the classroom instructor generally focuses on classroom practice. Any discussion of culture and its influence on learning usually reports characteristics of nonverbal communication, or what to do or not do to avoid embarrassing misunderstandings or confrontations in the classroom. Condon (1973) reports that empirical research has revealed cross-cultural differences in the effect of instruction on the rate and quality of intellectual development. Yet, "most of this information tends to remain . . . beyond the reach of adult education specialists who do not have direct access to such specific information" (p. 17). Literacy materials available to the second language teacher are most commonly those developed to teach first language literacy. When used in the second language classroom they ignore the problems which are rooted in the learner's different first culture and the learner's lack of prior formal educational experience. Even if the materials developers reveal this awareness, the instructors are not likely to cope successfully with this deficiency because of a lack of professional preparation.

The purpose of this paper is to present a conceptual framework for examining the second language acquisition process as a function of the learner's first culture and the learner's level of cognitive development. The three components of this framework, therefore, are the cultural, the cognitive, and the linguistic components. These three components are interactive and must be looked at as inseparable for us to understand the problems of the nonliterate second language learner.

---

*Graduate Studies in Adult Continuing Education, 101 Gabel Hall, Northern Illinois University, DeKalb, Illinois 60115, U.S.A.

CONCEPTUAL FRAMEWORK

Language and Thought

Discussion of culture and language often focuses on the work of Benjamin Whorf, linguist, philosopher, and anthropologist, who concluded from his pioneering study (1956) among American Indians:

> We cut nature up, organize it into concepts, and ascribe significance as we do, largely because we are parties to an agreement to organize it in this way--an agreement that holds throughout our speech community and is codified in the patterns of our language. (p. 213)

The Whorf Hypothesis can be stated in the form of two principles. The first principle, that of linguistic determinism, states that language determines thought. The second principle, that of linguistic relativity, follows from the first, that every language embodies a definite world view. These two principles have generated great debate in the field of psychology, the issues expressed by Whorf lying at the very heart of the field of psycholinguistics in which the interrelationships of language and thought are studied.

In opposition to this notion of linguistic relativity is the notion of linguistic universality which has found increasing support among many contemporary anthropologists, linguists, and psychologists. Elements of linguistic universality might include features of the grammar, vocabulary, and sound system which all languages seem to share.

In addition to this notion of linguistic universals, contemporary anthropologists and psychologists offer support to the notion of cognitive universals. They argue that "the functions of the human mind are common to the whole of humanity" (Boas, 1965, p. 135). The basic differences lie not in the process by which different peoples reason and think, but in their values, beliefs, and perceptions of the world around them. The following discussion will look in more depth at these two important aspects of cognition, conceptual ability and perceptual ability, and how they are influenced by culture.

Conceptual Ability

The French anthropologist, Claude Levi-Strauss, maintained that there is no difference in how the mind works from one culture to another or from one historical epoch to another. The difference is in the material used for thought--for example, the kinds of attributes that are used for forming categories. Primitive classification systems are based on qualities that are readily seen and experienced, whereas modern systems rely more on properties that are inferred from necessary relationships in the structure of the objects classified.

Piaget's theory of cognitive development among children has led to more cross-cultural research and theorizing than perhaps any other related research. Piaget sees cognitive development moving from more concrete to more abstract levels from childhood through adolescence and adulthood. Yet, admitting the lack of sufficient data among adults, he suggests that in many nonwestern cultures cognitive development does not go beyond the level of concrete operations and does not reach that of propositional (or more abstract) operations (Cole & Scribner, 1974). Literacy itself is a rather abstract representation of reality. The ability to read and write requires an ability in the learner to reason beyond the concrete stages posited by Piaget. Scribner and Cole (1981) report the work of Patricia Greenfield who after a period of study and observation in Africa linked schooled children's capacity for abstract thought to literacy.

Learning to read a second language has been described as an interaction of conceptual skills, past experiences, and linguistic skills (Coady, 1979). Conceptual development, according to Bruner's theory of cognitive growth, involves a shift in the manner by which a child groups things. Young American children, for example, tend to group on the basis of descriptive attributes--color, size, shape, or position, all of which are concrete. As they grow older, children and adolescents classify on functional attributes--what things can do or what a person can do with things. They also increasingly come to group items together under a common class name--to superordinate.

One manifestation of this change in conceptual development can be seen in the different patterns by which preschool children and educated adolescents and adults respond verbally in tests of word association. It has been theorized that the ability to categorize concepts automatically according to specific systems of responses is a prerequisite to learning to read (Dinnan, 1970-71). Examples of such expected responses from literate adults would include word opposites. Illiterate adults don't automatically link opposites or contrasting concepts. Literate children and adults generally do.

Greenfield and Bruner (1966) concluded that schooling provides a strong influence on the way classification schemes are developed and reasons for such schemes. Scribner and Cole (1981) report that school, by representing subject matter outside of its normal contexts of occurrence in a symbolic medium, provides the student with practice in abstract, decontextualized thinking. Schooling also is a setting in which children are exposed to large amounts of information organized into subject areas exhibiting common conceptual structures and many examples of problems of the same type.

Perceptual Abilities and Culture

Like conceptual abilities, perceptual abilities vary as a function of cultural and educational backgrounds. The term perception is used in the sense of the process by which people receive and process information that is primarily of sensory origins. Interest in perceptual abilities has led more recently to an increasing interest in the phenomenon of visual literacy--the ability to recognize pictures.

The ability to view a visual representation--a photograph, painting, poster, or film, for example--and perceive specific cues from it is a learned ability. The use of perspective to add depth to a two-dimensional surface is a fairly recent phenomenon in western culture dating only to the Renaissance. The ability to perceive three dimensions on a flat two-dimensional piece of paper is acquired by children as they begin school. This learned depth perception occurs, perhaps coincidentally, perhaps not, as children acquire literacy. So far research has not provided any conclusive evidence which would link schooling to the learned ability to perceive depth in a pictorial display.

Like depth perception, perception of orientation is almost certainly learned but quite often taken for granted. Studies of children in western and African cultures show that western children tend to position the object they are drawing in the center of the page. African children are observed to draw all over their pages.

The use of visual illusion in cross-cultural research has provided additional insights into the differences by which people perceive. Responses to certain visual illusions have been linked to cultural and even physiological characteristics of the learner, leading to one conclusion that there is a relationship between eye pigmentation and how individuals perceive certain colors. The implication is that people in different cultural groups may see color differently which may in turn affect color vocabulary in the different linguistic groups--an opposite conclusion from that advanced by Whorf.

Implications of the research results of certain anthropological studies would lead us to avoid a heavy use of visuals in the second language literacy classroom. Yet, certain very successful literacy campaigns have relied heavily on the use of pictures, namely Laubach and Freire. Cook (1980) summarizes the available research on the use of pictures in literacy education and finds no reason to discourage their use. But he does alert the materials developer or literacy instructor to the possible "cognitive barriers" which hinder new readers from correctly "seeing" a picture (p. 11).

Finally, cognitive styles have been studied from a cross-cultural perspective revealing a possible relationship between field dependence/independence and cultural characteristics (Witkin & Berry, 1975). Various linguists (Brown, 1980) have studied this dichotomy of field dependence/independence and second language learning resulting in the conclusion that both styles are important. Krashen (1981) has attempted to link the field dependence/independence dichotomy to differences in child and adult second language learning.

IMPLICATIONS FOR FURTHER RESEARCH

In summary, existing research into the peculiar cultural and cognitive characteristics of the adult nonreader learning to read a second language has yielded results which have been largely inconclusive. Yet, certain themes keep reappearing:

1) Conceptual skills development varies among people as a possible function of linguistic and cultural differences. This is the often repeated Whorf Hypothesis, that language determines thought. Comparative studies of preliterate societies continue to reveal distinctly different systems of conceptual skills, of organizing and processing information, than those systems possessed by members of more literate societies;

2) Perceptual skills may also vary as a function of cultural background. Research has revealed a link between how a person perceives a visual stimulus, for example, and certain physical characteristics, such as eye pigmentation. There is no conclusive evidence, however, to suggest how the literacy instructor should best use visuals.

3) There appears to be a link between conceptual skills development and formal learning experiences. Even within more literate societies, the manner by which information is organized and processed

will vary among individual learners leading to the potential communication gaps which continually appear in the multi-culural classroom.

Much of the research designed to investigate these problems has generated more questions than answers. Current instructional pressures would suggest we pursue research to answer these questions:

1) What are the differences in perceptual abilities which exist among nonliterate and literate adult learners? If such differences are found to reflect the abilities of entire linguistic or cultural groups of adult learners, how can materials be developed to cope with these differences?

2) If conceptual skills of nonliterates can be characterized as concrete, what strategies can be used to develop more abstract skills without the benefit of native language instruction?

3) What cognitive styles characterize the nonliterate adult learner? How can instructional strategies best meet the requirements of these special cognitive styles? Current research trying to link cognitive styles to success in adult second language learning should be extended to include the nonliterate adult learner as well;

4) Is literacy instruction best conducted in formal educational settings for previously unschooled adults? Are alternative models and methodologies, such as liberatory models or emphasis on self-directed learning, required for nonliterates to be more successful language learners?

Answers to these questions will be found when linguists and adult educators join forces to study the special characteristics of adult learners in the second language classroom. Future research should view the process of second language literacy acquisition as a complex process involving the interaction of the learner's first language, first culture, and his level of cognitive abilities, both perceptual and conceptual.

REFERENCES

Boas, F. The mind of primitive man. New York: The Free Press, 1965. (Originally published, 1911).

Brown, H.D. Principles of language learning and teaching. Englewood Cliffs, N.J.: Prentice-Hall, 1980.

Coady, J. A psycholinguistic model of the ESL reader. In Mackay, R., Barkman, B., & Jordan, R.R. (Eds.), Reading in a Second Language: Hypotheses, Organization, and Practice. Rowley, Mass.: Newbury House, 1979.

Cole, M., and Scribner, S. Culture and thought: A psychological introduction. New York: John Wiley and Sons, 1974.

Condon, E.C. Acculturation problems in adult education (No. 5). Human Relations in Cultural Context. New Brunswick, N.J.: Rutgers University, 1973.

Cook, B.L. Effective use of pictures in literacy education: A literature review. Literacy Review, 1980, No. 2, 1-55.

Dinnan, J.A. The key to learning. *Journal of Reading Behavior*, 1970-71, *3*(3), 1-13.

Greenfield, P.M., and Bruner, J.S. Culture and cognitive growth. *International Journal of Psychology*, 1966, *1*, 89-107.

Krashen, S.D. *Second language acquisition and second language learning*. Oxford: Pergamon Press, 1981.

Scribner, S., and Cole, M. *The psychology of literacy*. Cambridge, Mass.: Harvard University Press, 1981.

Whorf, B.L. *Language, thought, and reality*. New York: John Wiley and Sons, 1956.

Witkin, H.A., and Berry, J.W. Psychological differentiation in cross-cultural perspective. *Journal of Cross-Cultural Psychology*, 1975, *6*, 4-87.

LES PRATIQUES DE FORMATION EN ENTREPRISE AU QUEBEC

Pierre Paquet
Université de Montréal

INTRODUCTION

Malgré certaines enquêtes ayant jeté un éclairage partiel sur les pratiques de formation en entreprise du Québec force nous est de reconnaître que la moisson est peu abondante. Au moment où le présent projet fut mis sur pied, nous ne disposions que de certaines données partielles permettant difficilement de nous faire une idée précise et à jour, autant du volume d' activités de formation ou des différentes formes qu'elles revêtent, que de leurs caractéristiques spécifiques. Les données récentes sont plutôt fragmentaires et il est difficile, même en se basant sur des données plus anciennes, de décrire avec précision ce que sont les pratiques de formation en entreprise au Québec.

Aussi, le présent projet visait-il à combler cette lacune en faisant état de l'ensemble des activités de formation offertes aux travailleurs en emploi par les entreprises de vingt employés et plus, dans tous les secteurs industriels, à travers le Québec. Il s'agissait en effet de dresser un portrait d'ensemble et non de mettre le focus sur une dimension, un aspect ou une partie seulement de la formation en entreprise.

Notre mandat, tel que défini dans le cadre du présent projet, revenait à fournir des éléments de réponse à trois ordres de questions qui, selon notre analyse, représentent des enjeux majeurs pour les travailleurs... et pour l'éducation permanente:

- Le premier, et celui qui sera principalement traité dans le cadre du présent article, concerne l'accès à la formation.
- Le second vise les caractéristiques spécifiques des activités de formation réalisées par les entreprises.

- Le troisième a trait au contrôle exercé sur les activités de formation ou, pour le dire autrement, au partage des responsabilités entre employeurs, organisations syndicales et travailleurs directement concernés.

Ces trois ordres de questions sont complémentaires et permettent de mieux saisir les enjeux de la formation en entreprise, enjeux qui sont loin d'être évidents lorsqu'il s'agit d'un univers aussi mal connu et qui a suscité relativement peu de débats en milieu québécois. Or, avec les transformations de la structure industrielle et les changements technologiques qui se profilent à l'horizon, nous sommes portés à croire que la formation en entreprise constituera de plus en plus un objet de lutte autour duquel les travailleurs et les organisations qui les représentent auront à préciser leurs orientations et à définir leurs stratégies pour défendre leurs intérêts et non laisser les entreprises sacrifier ceux-ci au nom d'impératifs économiques immédiats.

Les données du sondage

La cueillette des données a été réalisée en deux temps. Dans le premier temps, toutes les entreprises sélectionnées ont été invitées à participer à une entrevue téléphonique variant entre 5 et 10 minutes... Dans un second temps, ces entreprises qui offraient de la formation durant et/ou en dehors des heures normales de travail ont été pressenties pour compléter un questionnaire auto-administré qui leur a été expédié par la poste. Au total, nous avons recueilli des données auprès de 1617 entreprises de vingt employés et plus, à travers le Québec.

Les variables retenues pour analyser l'accès à la formation

Comme point de départ nous avons retenu la variable activités de formation, de manière à donner une extension large à la notion de formation en entreprise, nous trouvant ainsi à inclure, à la fois, la formation sur le tas, la formation durant les heures de travail et la formation en dehors des heures de travail pour laquelle l'employeur paye, en tout ou en partie, les frais de scolarité. Se trouvent par contre exclues de notre définition d'activités de formation, les deux formes suivantes: la formation syndicale (car il ne s'agit pas d'une formation relevant de l'employeur) et l'apprentissage (que nous considérons comme un prolongement de la formation initiale).

Ce premier niveau permet de distinguer entre les entreprises où il existe certaines activités de formation et celles qui n'en ont aucune. A un second niveau, nous avons introduit la variable activités organisées de formation correspondant à la mise en place de stages, cours, séminaires, colloques, sessions de travail... Nous étions ainsi en mesure de distinguer, parmi les entreprises, celles qui n'ont pas de formation organisée (soit qu'elles n'offrent aucune formation, soient qu'elles ne réalisent que des activités de formation sur le tas) et celles qui offrent des activités organisées (durant et/ou en dehors des heures de travail).

Enfin, à un troisième niveau plus restrictif encore, nous avons distingué entre les entreprises selon qu'elles possèdent ou non des politiques ou des programmes de formation. Nous nous trouvions alors à exclure, parmi les entreprises offrant des activités de formation organisées, celles qui le font de façon ponctuelle ou "ad hoc". Celles qui le font dans le cadre de politiques ou de programmes sont sans doute susceptibles d'offrir aux travailleurs de meilleures possibilités d'accès à la formation, à cause même du caractère récurrent de ces activités.

Chacun de ces niveaux a fait l'objet de trois mesures à partir des indicateurs suivants:
- pourcentage d'entreprises offrant de la formation,
- pourcentage de main-d'oeuvre travaillant dans ces entreprises,
- pourcentage de travailleurs ayant bénéficié, de fait, d'actions de formation.

Les résultats de l'enquête menée auprès des entreprises

Nous appuyant sur les données d'enquêtes antérieures, nous avions formulé une hypothèse voulant que des pratiques de formation en entreprise au Québec soient relativement peu développées.

Les résultats obtenus lors de l'enquête auprès des entreprises québécoises nous incitent à rejeter cette hypothèse. L'indice global relatif à la présence d'activités, sous une ou plusieurs formes à la fois, montre que l'accès potentiel des travailleurs à la formation est largement répandu. 83.3% des entreprises, embauchant 95.3% de la main-d'oeuvre comprise dans notre échantillon, déclarent des activités de formation. Bien sûr, cela ne signifie pas que l'accès potentiel à la formation soit identique peu importe les caractéristiques des entreprises ou de la main-d'oeuvre, mais il n'en demeure pas moins que de façon générale, celui-ci s'étend pratiquement à l'ensemble de la main-d'oeuvre couverte par notre enquête.

Le tableau ci-joint regroupant nos trois types de mesure permet de confirmer que l'accès potentiel aux activités de formation est relativement développé parmi les entreprises québécoises de vingt employés et plus. A toutes fins pratiques, quatre travailleurs sur cinq sont éventuellement susceptibles de recevoir de la formation, car ils sont au service d'entreprises qui réalisent des activités organisées et disposent de politiques ou de programmes de formation. L'analyse en termes d'accès réel montre d'ailleurs que plus de 90% des bénéficiaires de formation travaillent dans de telles entreprises.

Nous pourrions résumer l'analyse de l'accès à la formation en affirmant que l'étude des données fait ressortir deux types de situation. D'un côté, nous trouvons une minorité importante d'entreprises, employant les quatre cinquièmes de la main-d'oeuvre couverte par notre enquête, où existe un contexte favorable à la formation. De l'autre côté, nous trouvons une majorité d'entreprises, ayant à leur service un cinquième de la main-d'oeuvre, qui ne répondent pas aux conditions permettant à la formation d'atteindre un niveau appréciable de développement; il s'agit des entreprises sans aucune activité de formation, de celles qui réalisent seulement de la formation sur le tas, et enfin, de celles qui mettent sur pied des activités organisées, mais de façon ponctuelle (et non dans le cadre de politiques ou de programmes de formation).

TABLEAU

Accès à la formation
en fonction de nos trois types de mesure

TYPE DE MESURE	ACCES POTENTIEL Proportion d'entreprises	 Proportion de main-d'oeuvre	ACCES REEL Estimation de la proportion de bénéficiaires
	%	%	%
1. Présence d'activités de formation sous une ou plusieurs formes à la fois			
. oui	83.3	95.3	36.2
. non	16.7	4.7	-
TOTAL.....	100.0	100.0	36.2
2. Présence d'activités organisées de formation			
. oui	66.4	90.8	35.2
. non	33.6	9.2	1.0
TOTAL.....	100.0	100.0	36.2
3. Présence de politiques ou de programmes de formation			
. oui	44.6	79.9	32.9
. non	55.4	20.1	3.3
TOTAL.....	100.0	100.0	36.2

Par contre, il s'agit règle générale d'une formation directement liée à la tâche, de courte durée, ne se traduisant pas (pour les travailleurs) dans une amélioration de leurs conditions de travail (augmentation de salaire, promotion ou mutation). En outre, dans la majorité des cas, surtout s'il s'agit d'activités de formation durant les heures normales de travail, l'employeur seul a mis sur pied ces activités, décide de leur contenu, sélectionne les travailleurs qui doivent les suivre. Les travailleurs ou leurs organisations ont donc peu d'emprise sur le processus de formation dans les entreprises.

Conclusion

Malgré le fait que nous avons utilisé des indicateurs relativement grossiers, nous nous croyons en mesure d'affirmer que la formation en entreprise, au Québec, répond à des impératifs de même nature que dans d'autres sociétés à économie développée: ces activités visent à accroître la productivité de la main-d'oeuvre en l'adaptant aux besoins de l'appareil de production. La description des caractéristiques de la formation et l'importance du contrôle patronal sur ces activités tendent également à démontrer que la situation québécoise correspond à ce modèle.

Compte tenu de la nature des activités réalisées par les entreprises et du peu de contrôle qu'exercent les travailleurs ou leurs organisations sur ces activités, nous pouvons affirmer que la formation en entreprise, règle générale, est directement axée sur les besoins immédiats de l'entreprise, à savoir l'adaptation de la main-d'oeuvre. A ce niveau, une bonne partie de la main-d'oeuvre est au service d'entreprises en mesure de répondre à ce type de besoins. Toutefois, il est moins évident que ces activités puissent répondre adéquatement aux besoins de qualification des travailleurs, par exemple pour accroître leur compétence, se prémunir contre les mises à pied ou les fermetures d'usines, favoriser leur promotion dans les grilles de classification, ou leur permettre d'acquérir des emplois plus stables, mieux rémunérés et plus valorisants...

Nous nous trouvons en fait devant deux logiques: celle de l'entreprise visant à disposer d'une main-d'oeuvre adaptée aux exigences de la production, au moindre coût, d'où les entreprises auront tendance à privilégier des activités de courte durée, directement reliées à la tâche, et non reconnues dans les grilles de classification ou les échelles de salaires; la seconde logique, celle des travailleurs, poursuivant plutôt un objectif de valorisation de la force de travail, d'où ceux-ci auront tendance à privilégier des activités qualifiantes, transférables et reconnues par l'entreprise au niveau des conditions de travail, bref des activités axées sur une véritable reconversion de la main-d'oeuvre et non sur une simple adaptation à la tâche.

INSTITUTION-RELATED MOTIVATION PREDICTORS OF THE PENCHANT FOR LEARNING IN THE NATURAL SOCIETAL SETTING

Ingrid Pipke*
Justice Institute of British Columbia

There is a growing tendency for progressive educators to characterize self-directed learning and education occurring in formal instructional settings as mutually exclusive. Self-directed learning is "good" and the way of the future; education in formal instructional settings is limited and a relic of the past. Rhetoric concerning this is fuelled by Illich who wants to de-school society and others who regard "orthodox" or institutionalized forms of adult education as a waste of public money. The debate is also given momentum by UNESCO'S insistence on the need to foster "informal" learning (in the natural societal setting). Self-directed learning appears congruent with demands for democratization and "open" learning and proponents appear to believe it has little to do with the behaviour of learners in formal settings. But learning in formal instructional settings has a lot to do with self-directed learning. Indeed, the notion that the most effective self-directed learners also learn best in formal instructional settings appears to pose problems for those who portray self-directedness as the panacea for ills in formal education.

Self-directed learners and those preferring to learn in formal instructional settings (see Little, 1979) may not be as different as some people appear to think. Penland (1977) alluded to this question by observing that "combination" learners (who learn both in natural societal and formal instructional settings) are more "socially mature" people less likely to "shy away" from group processes than persons who are just "self-planned" learners. The present study was designed to investigate an aspect of this problem, namely the relationship between motives for participation in formal instructional settings and the penchant for engaging in self-directed learning (when faced with the "distraction" of competing "non-learning" activities). Of Boshier's (1977; 1982) six Education Participation Scale factors, Cognitive Interest identifies people who learn for the sake of it while high scorers on the Community-Service factor can be presumed to be altruistic, "socially mature" (in the sense described by Penland) and thus more likely to engage in learning in the natural societal setting, than low scorers on these factors. Tough (1978) maintained that the "most common motivation" for doing learning projects arose from the "anticipated use of application of the knowledge or skill". Learning for its own sake was "less common". Casual observation is not congruent with these conclusions - indeed, many self-directed learners appear to undertake learning projects for their intrinsic satisfaction. Moreover, it was expected that learners enrolled in formal instructional settings for Cognitive Interest and Community Service reasons would have a greater penchant for learning in the natural societal setting than those enrolled for other more "instrumental" factors such as Professional Advancement, Social Stimulation, External Expectations, and Social Contact. Part of the rationale for this prediction stemmed from the conceptual foundations underlying deficiency (life-chance) and growth (life-space) motivation (Boshier, 1977). Extant instruments such as the E.P.S. (Boshier, 1982) and the Conservatism Scale (Wilson, 1973) were available for use in this study. But it was also necessary to develop an instrument to measure a "preference" for self-directed learning when other, perhaps "easier" options, such as entertainment, socializing, or relaxing were available. Thus a major part of this study involved development of the Activities Preference Inventory.

---

* 4180 West 4th Avenue, Vancouver, B.C. V6R 4J6 Canada

Activities Preference Inventory

Items in the A.P.I. were based on the assumption that, when confronted with spare-time, people choose between a "learning activity" and non-learning sports, cultural, entertainment, civic, home/garden, and family activities. It can be argued that "learning" occurs every moment of the day irrespective of whether a person is asleep, awake, watching television, playing sport, or eating pizza. In this study, the non-learning activities are those engaged in by people who have no deliberate intention to learn. Rather, they engage in them for entertainment, relaxation or to pass time. Work was excluded from this list of "non-learning distractors" because although many people do job-related things away from their main work setting, "work" and "spare" time were deemed to be mututally exclusive. Early in the study it was decided that the A.P.I. would consist of a set of forced-choice items where the respondent had to indicate a preference for a "learning" or "non-learning distractor" activity. During the initial conceptualization of the problem, it was realised that distractor activities could be passive (e.g., watching television, relaxing at home) or active (e.g., playing sport, going to a party). Moreover, in an attempt to clarify the fact self-directed learning involved both program planning and instructional management (see Boshier, 1978; Verner, 1962) both "planning" (e.g., plan a language learning program) and management (teaching) items (e.g., teach yourself a physical skill) were included in the scale. The first form of the A.P.I. consisted of 144 forced-choice items where respondents had to indicate a preference for a "learning" or "distractor" activity. Figure 1 shows how items were arrayed.

		Learning Activity	
		Self-Taught	Self-Planned
Distractor	Active	1	3
	Passive	2	4

Fig. 1 Framework for compiling Activities Preference Inventory items

Items from quadrant 1 forced respondents to choose between a self-taught learning activity and an "active" distractor (e.g., teach myself gardening skills/visit a family member). Items from quadrant 2 were where Ss had to choose between a passive distractor and a self-taught learning activity. Quadrant 3 items encompassed situations where the Ss chose between a self-planned learning activity and an active distractor. Quadrant 4 items involved a choice between a passive distractor and a self-planned learning activity. The first form of the A.P.I. consisted of 36 items drawn from each quadrant. A.P.I. total scores were derived by counting the number of times the "correct" (i.e., learning) activity was chosen. Both the learning and the distractor branches of each item concerned the six preoccupations of daily life (sports, culture, entertainment, etc.). Items were formatted as follows. First, the twelve sports, cultural, civic, entertainment, home/garden and family learning items were listed on a vertical axis. Then, the twelve sports, cultural, entertainment, civic, home/garden, and family distractors were listed on a horizontal axis. Each learner activity was paired with each distractor activity for a total of 144 items. Because every learner branch was arrayed against every distractor branch, cultural distractors were sometimes arrayed against sports-type learning activities, and so on. The scale was balanced because every sports, cultural, entertainment, civic, home/garden, and family-related learning activity was arrayed against every sports, cultural, entertainment, civic, home/garden, and family distractor. Thus, item content was controlled; what distinguished the available choice was the fact one branch was and the other was not learning-centered.

Data for 118 Canadians was blended with that for 62 Singaporeans for a total number of 180. The data were entered into LERTAP (Nelson, 1974). Of the 144 items, 66 attained a point biserial item x whole correlation of .40 or greater. Hoyt's coefficient of reliability (.96) suggested that people responded in an internally consistent manner. The A.P.I. was refined by deleting most items with item x whole correlations of less than .40. However, eight items with correlations of .38, .37, .36, .35, and .30 (see Table 1) were retained because of the need to keep distractor and learning branches from each of the "spare time" preoccupations (sports, entertainment, etc.).

Table 1

POINT-BISERIAL ITEM X WHOLE-SCALE CORRELATION COEFFICIENTS FOR THE ACTIVITIES PREFERENCE INVENTORY

Items (abbreviated)	Item x Whole Correlation Initial Form	Item x Whole Correlation Final Form	Percent Answered Correct
Attend a concert/plan language program	.40	.42	26.1
Fix-up living quarters/current affairs knowledge	.35	.36	39.4
Visit family/home improvement project	.43	.45	27.8
Teach self physical skill/go to movie	.42	.45	49.4
Learn sport/go to movie	.36	.42	45.6
Structure arts program/fix-up living quarters	.47	.47	26.1
Watch television/learn sport	.40	.44	49.4
Relax at home/structure arts program	.48	.51	26.7
Visit family/teach self entertainment	.44	.48	37.8
Plan language program/fix-up living quarters	.44	.47	26.7
Relax at home/visit museum with guidebook	.49	.52	32.2
Teach self entertainment/telephone a relative	.47	.49	52.5
Visit family/visit museum with guidebook	.49	.55	27.8
Teach self physical skill/relax at home	.40	.44	45.0
Telephone a relative/visit museum with guidebook	.46	.51	39.4
Learn sport/relax at home	.37	.41	41.7
Teach self physical skill/visit family	.44	.50	47.8
Telephone relative/plan language program	.61	.66	30.0
Visit family/learn sport	.40	.43	43.3
Teach self entertainment/watch television	.42	.47	54.4
Home improvement project/fix-up living quarters	.44	.48	35.0
Read book on family/telephone relative	.45	.47	51.1
Teach self physical skill/participate in sport	.36	.32	32.8
Watch sports/plan language program	.41	.42	35.0
Structure arts program/attend a concert	.56	.58	16.7
Teach self entertainment/go to movie	.46	.53	33.9
Relax at home/plan family project	.47	.47	21.1
Read book on family/visit family	.45	.48	36.1
Structure arts program/paint, sculpt, dance	.30	.30	30.0
Teach self civic affairs/watch television	.53	.55	36.7
Visit museum with guidebook/participate in sport	.40	.39	26.1
Paint, sculpt, dance/current affairs knowledge	.36	.34	38.9
Teach self civic affairs/attend a concert	.50	.54	23.9
Teach self gardening/watch television	.48	.48	47.2
Current affairs knowledge/watch sports	.43	.42	41.7
Paint, sculpt, dance/teach self civic affairs	.36	.35	32.2
Home improvement project/attend concert	.53	.55	33.9
Go to movie/teach self gardening	.55	.53	33.2
Watch television/plan family project	.45	.48	27.8
Current affairs knowledge/participate in sport	.40	.38	31.7
Teach self gardening/attend concert	.41	.42	32.8
Read book on family/watch television	.47	.50	41.7
Watch sports/home improvement project	.50	.50	46.7
Paint, sculpt, dance/teach self gardening	.38	.35	38.3
Plan family project/attend concert	.48	.47	17.8
Go to movie/read book on family	.54	.51	25.0
Watch sports/plan family project	.40	.36	29.4

After these adjustments, the new mean item x whole correlation was .46; the lowest was .30; the highest .66. This table also shows the percent of Ss choosing the "correct" option; no item was excessively skewed. After these processes 47 items (representing intersects in the original 144 cell matrix) remained. Each item was composed of a learning and distractor branch. Of the 47 final items, there was a minimum of four self-taught and four self-planned learning activities concerned with sport, cultural, entertainment, home/garden, civic, and family. From the horizontal axis that listed non-learning distractors, between four and six "active" activities concerned with sport, cultural, entertainment, home/garden, and family were promoted into the final form. As well, the final form contained a minimum of four to six

BEST COPY AVAILABLE

"passive" distractors composed of activities concerned with sport, cultural, entertainment, home/garden, and family. Thus, in the final form, the item content and choices presented to respondents was isomorphic with the initial 144 item form of the A.P.I.

Reliability

LERTAP ensured that only internally consistent items were promoted into the final form. However, extra steps were taken to ensure that the instrument was internally consistent. In the first, odd-numbered items from the 47 item form were correlated with even numbered items. The result ($r=.88$, $df=133$, $p< .0001$) showed that Ss made consistent responses. Secondly, a score derived by summing over the first 23 items was correlated with a score from the second half of the instrument. The result ($r=.66$, $df=133$, $p<.0001$) also attested to the internal consistency of the scale.

METHOD

Subjects for this study were 133 participants (50 men, 83 women) in university-sponsored adult education courses or training seminars. Of these, 70 participants lived in Canada, 63 were Singaporeans. Each participant completed four questionnaires. The first elicited information on sex, age, country of birth, highest educational level, and occupation. The Activities Preference Inventory was used to determine the penchant for self-directed learning. The Educational Participation Scale (Boshier, 1982) was used to measure motivational orientations while Boshier's (1983) modification of the Conservatism Scale (Wilson, 1973) was used to measure conservatism. Class instructors administered the questionnaires; the data was collected over a seven week period.

RESULTS

Characteristics of Respondents

A total of 133 adult educators responded to the questionnaires. Of these, 50 were male and 83 were female. Their ages ranged from 19-62 years with a mean of 33 years (S.D.=9.13). Most respondents were born in Canada (n=53), Singapore (n=44), Malaysia (n=14) or the U.S. (n=7). Most respondents were well educated; 46 had a university degree, 22 had part of a degree, and 20 had some post- secondary or trade qualifications. The health profession was the largest occupational group (n=30), followed by professional educators (n=26), those employed by business and industry (n=20), and individuals working in justice-related fields (n=20).

Norms for the Activities Preference Inventory

Table 2 shows norms for the A.P.I. Recall that there were 47 possible "correct"

Table 2

Norms for the Activity Preference Inventory

Variable	N	Percent	$\bar{X}$	S.D.	F-ratio	F-Prob	Min.	Max.
Sex								
Male	50	37.60	18.52	12.42	.45	ns	0	44
Female	83	62.40	17.23	9.72			0	44
Country of Birth								
Singapore/Malaysia	58	44.96	19.84	12.06	5.24	.007	0	44
Canada/United States	60	46.51	14.37	7.89			0	36
Other	11	8.53	21.91	12.36			1	40
Educational Level								
No formal qualification	1		5.0	14.38	2.37	.03		
Completed grade 10-11	5	3.94	23.20	11.49			9	40
Grade 12 or equivalent	10	7.87	16.70	13.77			4	44
Post secondary or trade qual.	20	15.75	21.00	13.77			0	44
Part of a university degree	22	17.32	11.36	5.25			1	33
University degree	46	36.22	19.89	9.80			2	44
University degree plus additional qualification	14	11.02	14.86	9.20			5	35
Graduate degree	9	7.09	17.67	11.26			0	40
Occupational Group								
Business & Industry	20	16.39	23.50	12.45	3.41	.002	0	44
Health	30	24.59	14.57	8.68			0	40
Police	20	16.39	16.40	10.82			0	40
Voluntary Organization	3	2.46	15.67	4.93			10	19
Educational Institution	26	21.31	18.19	10.14			5	46
Statutory Organization	5	4.10	28.80	12.70			14	44
Student	13	10.66	10.00	6.56			2	33
Government	5	4.10	21.40	13.05			13	44

BEST COPY AVAILABLE

responses. The combined Singaporean and Canadian grand mean was 17.86 (S.D.=11.07). This is the baseline score against which new populations can be compared. Note that men were not significantly more or less self-directed learning oriented than women (F=.45, ns). The remainder of the table presents mean A.P.I. scores for various ethnic, education, and occupational groups.

Those born in "other" countries had the highest A.P.I. scores; the Singaporeans, most of whom were Chinese, had the next highest scores. Canadians had the lowest scores; some were adult education students at U.B.C. and possibly preoccupied with studying for degree/diploma requirements and thus with little margin for self-directed learning. There was also a significant difference on A.P.I. scores within education levels (F=2.37, p.< 03). Individuals who had only completed grade 10-11 had the highest mean A.P.I. score ($\bar{X}$=23.20) followed by those with a post-secondary or trade qualification ($\bar{X}$=21.0), and those with a university degree ($\bar{X}$=19.89). Individuals employed by statutory organizations had the highest mean A.P.I. score ($\bar{X}$=28.80) followed by those working in business and industry ($\bar{X}$=23.50) and government employees ($\bar{X}$=21.40).

Relationship between A.P.I., E.P.S. and C-scale Scores

For each S a total A.P.I. score was derived by counting the number of correct responses on items promoted to the final form. E.P.S. scale scores were derived by summing over responses to items that constitute the six factors shown on the standard scoring key (Boshier, 1982). C-scale scores range from 0-100; the higher the score, the more conservative the respondent. A.P.I. scores were significantly correlated to enrolling in adult education classes in formal instructional settings for Social Contact (r=.14, df=133), p< .04), and Community Service (r=.16, df=133, p< .03) reasons. There was no relationship between A.P.I. scores and Social Stimulation (r=.03), Professional Advancement (r=.04), External Expectations (r=-.04), or Cognitive Interest (r=.10). However, those with higher A.P.I. scores (i.e., more "learning" oriented) were significantly more conservative (r=.13, df=133, p< .06-one-tailed test) than Ss who largely preferred the non-learning distractors. A.P.I. scores were also correlated with age (r=.26, df=133, p< .001). In an attempt to distinguish joint from single-variable effects, ten variables were entered into a regression equation. A.P.I. scores were dependent and the six E.P.S. factors, age, sex, and conservatism were the independent variables. Table 3 shows that variables meeting the criterion for entry into the equation attained a multiple r of .34.

Table 3

Socio-motivational Predictors of the Penchant to Engage in Learning in the Natural Societal Setting

Variable	$\bar{X}$	S.D.	Multiple r	Simple R	Beta	F	F-prob.
Age	33.18	9.12	.26	.26	.25	9.57	.002
Conservatism	36.71	13.91	.30	.14	.17	6.46	.002
Community Service	11.68	4.55	.33	.16	.20	5.83	.001
Social Stimulation	13.90	5.04	.34	.04	-.11	4.36	.002

The most powerful single variables, as indicated by beta weights, were age (beta=.25) and enrolling in formal instructional settings for community service (beta=.20) reasons. Thus, older individuals or those enrolling for community service reasons were more likely to have high rather than low A.P.I. scores. Conservatism (beta=.17) when combined with age, had a significant effect on A.P.I. scores. These combined variables yielded a multiple r of .30 before the cut-off was reached. Social stimulation, the last variable in the equation, had a negative effect on A.P.I. scores (beta=-.11). Thus, individuals who consistently chose the learning option on the A.P.I. were more likely to be older, conservative, and enrolled in adult education classes for community service reasons and not for social stimulation.

These were provocative results and, if taken at face value, suggest that the penchant for learning in the natural societal setting was meaningfully related to enrolling for Community Service. The hypothesized relationship between A.P.I. scores and Cognitive Interest was not sustained. But even the fact some motives for participation in formal instructional setting were related to A.P.I. scores appears to pose problems for those who argue that self-directed learners are psychologically different from persons learning in formal instructional settings. The fact persons with the highest A.P.I. scores were older, more conservative, and more likely to be enrolled in formal instructional settings for Community Service reasons than those with a lesser penchant for self-directed learning, is also of great theoretical interest. However, when interpreting this result, remember that nearly 50 percent of the population were Singaporeans known to have higher ($\bar{X}$=19.84) A.P.I. scores than Canadians ($\bar{X}$=14.37) in the study. But, despite this, it is consistent with theory concerning the antecedents of conservatism (see Wilson, et. al., 1973) to find that, when confronted with a choice between "learning" and other active or passive "non-learning" (superficially hedonistic) activities, the older conservative is more likely to opt for "learning" than is the liberal.

REFERENCES

Boshier, R.W. Motivational orientations revisited: Life space motives and the Education Participation Scale. Adult Education, 1977, 27(2), 89-115.

______ Education Participation Scale. Vancouver: Learningpress, 1982.

______ Adult education - programme planning and instructional design. Continuing Education in New Zealand, 1978, 10(1), 33-50.

______ Education inside: Motivation for participation in prison education programs. Ottawa: Soliciter General, 1983.

Little, D. Adult learning and education: A concept analysis. In Yearbook of Adult and Continuing Education. Chicago: Marquis Academic Media, 1980, 3-19.

Nelson, L.R. Guide to LERTAP use and interpretation. Dunedin, New Zealand: U of Otago, 1974.

Penland, P. Self-planned learning in America. Pittsburgh: Communications Media Research Centre, University of Pittsburgh, 1977.

Tough, A. Major learning efforts: Recent research and future directions. Adult Education, 1978, 28(4), 250-263.

Verner, C. A Conceptual scheme for the identification and classification of processes. Washington, D.C.: Adult Education Association of the U.S.A., 1962.

Wilson, G.(Ed) The psychology of conservatism. London: Academic Press, 1973.

PHILOSOPHIES OF ADULT EDUCATION AND AMERICAN VALUES

Ronald Podeschi
University of Wisconsin-Milwaukee

Introduction

Adult education in the United States--in spite of the newness of its packages--is as old as the cultural assumptions of the American society. The current purposes and processes in adult education, like other American educational and social institutions, are rooted in mainstream values. As Elias and Merriam rightly contend, philosophies of adult education must be analyzed within their socio-cultural context. My purpose is to analyze philosophies of adult education within the context of American culture.

There are two primary questions in this process: 1) What are the dominant value patterns in the U.S.? 2) How do philosophies of adult education connect (or do not) to these value patterns?

My first objective is to describe U.S. values through researching works on American culture by foreign and American scholars, past and present. Second, utilizing this backdrop, I shall look at five of the philosophies categorized by Elias and Merriam: Liberal (e.g., intellectual powers of the mind); Progressive (e.g., useful problem-solving knowledge); Radical (e.g., education for societal change); Behaviorist (e.g., evaluation and accountability by competencies); Humanistic (e.g., student-centered learning with cooperative activity).

There are always limitations to research and analysis. This topic flows as big and muddy as the Mississippi River. It is important to put my limitations up front. First, and not least, I am an outsider to adult education as a field, and my grasp of the field keeps oozing out of my hands. Second, these categories of philosophies of adult education, as Elias and Merriam suggest, are distinctions that are vulnerable to oversimplication and overemphasis. Likewise, the application of national character is open to overuse. Fourth, there is the stickiness of societal change and the question whether American values are shifting in recent years.

Each of these cautions could be explored in an analysis of their own. I am going to glide over them here, not because they are unimportant, but because of their complexity, and because I still contend that the thrust of what follows does connect to reality.

American Value Patterns

Any summary of U.S. values is difficult, not only because it is a society where change and newness themselves are values. It is difficult also because of inherent contradictions. As John Steinbeck concludes in his America and Americans, "Americans seem to live and breathe and function by paradox" (p. 33).

Ron Podeschi, Associate Professor, Cultural Foundations of Education
University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201

Still, tracking scholars of American culture, from various countries and periods of history, produces patterns of values, persistent although paradoxical. The capsule that follows does not pretend to be inclusive. It is an abbreviation of quotes selected from the literature to portray key values. (Used heavily is my best source: American Value Patterns: A Cross Cultural Perspective, by Edward Stewart who grew up in Brazil.)

Practicality "Scarcely any one in the United States devotes himself to the theoretical and abstract portion of human knowledge. . . . To minds thus predisposed, every new method which leads by a shorter road to wealth, every machine which spares labor, every instrument which diminishes the cost of production, every discovery which facilitates pleasures or augments them, seems to be the grandest effort of the human intellect" (Tocqueville, p. 270).

Measurability "To the American the essential quality is measurability. The world to him is seen as having dimensions that can be quantified . . . . Success and failure are measured by statistics; so is amount of work, ability, intelligence and performance. The quantification of the world and experience is deeply ingrained in the American." (Stewart, p. 23)

Efficiency "There are more new tests published every year for measuring every conceivable individual or group. School and college, the civil service, the army and navy, the office, factory, and department store are filled with them. Behind the confidence in tests rests the idea. . . . No usable force should go to waste or be misapplied." (Huizinga, p. 300)

Individualism "The American believes, ideally, that he should be his own source of information and opinions. . . . It is implicitly accepted that each child or person should be encouraged to decide for himself, develop his own opinions, solve his own problems, have his own things and, in general learn to view the world from the view of the self." (Stewart, p. 70)

Motivation/Activity/Achievement "The importance of motivation in American society may well be associated with the phenomenon that the self-images of Americans tend to be general and vague. . . . Restless and uncertain, he has recurrent need to prove himself and thereby attain an identity and success through his achievements." (Stewart, p. 39)

Materialism "People are always dashing around, 'going places,' and getting things . . . whether printed or on the radio or televised, advertisements tell you what to buy, eat, and use; how to 'have it now' on increasingly easy terms; what things you and your family must have to be modern or American. . . . Whatever it is you want you must have a lot of it, have it now, and have it typically. (King, p. 298)

Equality "Running throughout the American's social relationships with others is the theme of equality." (Stewart, p. 50) "Americans . . . find it very confusing to shift from high to low status as the situation demands." (Mead in Stewart, p. 50) "Nothing seems to be regarded with greater hostility by the vast majority of Americans than the naked exercise of authority, whether it be by a policeman, a government official, a parent, or even a college professor." (Evans, p. 67)

Conformity "Anyone who has traveled in America will tell you of the extraordinary herd spirit which prevails there. . . . A feeling for conformity, fear of deviating from the good model, controls behavior. . . . The American wants to be like his neighbor." (Huizinga, pp. 172, 237) "American society does not encourage individual diversity where it conflicts with the standards of an often ruthless peer group or community." (Lerner, p. 550)

Optimism/Progress/Perfectability ". . . there is the belief that we can repudiate our individual and collective pasts . . . as a result of purely human initiative . . ." (Evans, p. 77). "Perhaps no people in history have believed so firmly as Americans in the ability of education to improve the individual. . . ." (Stewart, p. 62).

Philosophies of Adult Education

Liberal adult education, with its tradition of liberal arts from Europe, is one of two adult education philosophies that runs against the mainstream of U.S. value patterns. Intellectualism not only goes upstream through American history; its opposite describes the American character for historians such as Richard Hofstadter in Anti-intellectualism in American Life.

It is difficult to find American values in clear support of Liberal Adult education. However, it is easy to point to some that are enemies: practicality, efficiency, measurability and their partner, specialization. Liberal adult education has been associated historically with the elite in America. It could also be associated with some who have been out of the mainstream, but not by choice: women. Historian James Truslow Adams contended that it was 19th century women who kept liberal arts culture alive and gave birth to American adult education while men dove into the practical pursuits of knowledge. Would Everett Dean Martin say today what he said when adult education started to grow earlier in this century?:

> The American way of doing things is to proceed to organize them. . . . "Adult Education" is becoming a slogan, a phrase to capitalize, a label to attach to various activities which have hitherto borne other brands. . . . Our first question about anything is . . . "what use is it." (pp. 6-10)

Progressivism, which carried the American flag for philosophy of child education as well as Progressive adult education through much of the first half of the 20th century, also carried its namesake: progress. It is only one of several American values that underlay these parallel movements as well as the American philosophy of pragmatism.

John Dewey, education's godfather in the movements, reacted against what he considered deadweight in Liberal education with American values: individual problem-solving against absolute truth; equality against elitism;

activity against the passivity of knowledge. Dewey's followers pushed progressive education even past Dewey, further into American values: Pragmatic truth became practicality. Individual needs and interests became equality between student and teacher. Social intelligence became efficiency, measurability and conformity--even Americanization.

Elias and Merriam are on target when they state: ". . . only a few adult educators have taken up the social thrust of the progressive education movement" (p. 68). Actually, the social thrust of the progressive movement never caught hold in U.S. schools either. To understand this is to understand how part of the movement went upstream against mainstream values.

It is also to understand how *Radical* adult education now runs against the current of American value patterns. Radical philosophy, portrayed in particular by Freire, takes one American value at its roots: equality. Whereas most readers of Freire in the United States just focus on inequality of educational relationships--as most progressives did fifty years ago--real followers of Freire also focus on structural inequality in the society.

This push for societal change by radicals in education leans toward an "Equality of result." This is up against the American belief in "equality of opportunity," and its co-power, formal education, which gains in value with the increase of technology. This is mythical equal opportunity according to radical adult educators now just as it was to earlier progressives like Counts and Brameld. But like these predecessors who naively dared schools to build a new social order, Radical adult educators face mountains of other powerful values as well: individualism, achievement, materialism--all solidified by competition.

It is the other two adult education philosophies from the Progressive spring that now most reflect American values: *Behaviorist* and *Humanistic*. Ironically, the adult education field in the U.S. is vulnerable to both ignoring their coherence to similar American values *and* ignoring the deeper philosophical conflicts between the two.

First, the similarities, in spite of minor skirmishes on the surface. 1) As adult educators stress behavioral "needs assessment" and supporters of andragogy want "immediate application of knowledge," practicality rules the premises about knowledge. 2) The Skinnerian Behaviorist and the Rogerian Humanist may argue about classroom structure and freedom, but optimism and progress--whether inside or outside the individual--permeate their principles and practices. 3) Behaviorist "individual accountability" and Humanistic "intrinsic motivation" are both well rooted in American individualism. Individual achievement may differ between "competencies" and "personal growth," but the striving individual self is central to both. The recent perspective of Elizabeth Cagan could be applied equally:

> This new individualism insists that we all have the power to attain self-actualization and to realize our dreams; if we remain unfulfilled, it is because we have not achieved mastery. . . . The realities of social class, privilege, power, and other external constraints are set aside in this seemingly egalitarian conception. (p. 232)

What separates us, cry the Humanists, is our belief in individuality opposed to conformity. But the Humanist is vulnerable, like the Progressive of an earlier time, to promote conformity unknowingly through a collective individualism. The value of association that permeates individualism is the primary American paradox. The Englishman, Edmund King, paints the paradox:

> . . . students in the United States enjoy in some ways a finer opportunity for self-determination than students in other countries. That is one aspect of the American legend. On the other hand, Americanization, group work and adjustment, and the influence of administrators, teachers, and books bring about a socialization unparalleled outside the communist countries. (pp. 296-297)

Whether aware of it or not, Behaviorist and Humanistic adult educators do have some common contexts of societal values. The additional irony is that much of the current mixture of principles and practices in adult education ignores the conflict between philosophical assumptions that does exist. As Stewart explains, "The American is a pragmatist. . . . That several of his ideas or values may contradict one another does not bother him" (p. 74)

Two value differences that do separate the Humanistic philosophy from the Behaviorist philosophy are two that also separate Liberal and Radical philosophies from the Behaviorists: efficiency and measurability. Epistemological and metaphysical differences lie here. But they appear to be glossed over frequently in adult education in an optimistic drive to progress through whatever pot pourri of techniques seem to be appealing.

At least, this is my impression in exploring the field. Here is one example of current mixture. In a recent book of adult education controversies, one author concludes:

> The claim that program planning and organization should follow a format tied to behavioral objectives and achievement of competence because it assures accountability, personalization, and application of learning cannot be supported or refuted on the basis of existing empirical data. Rigorous research is required to test the validity of this claim. (pp. 149-50)

What is ignored is the crucial distinction between empirical questions and philosophical questions. Definitions as well as desirability of "accountability," "personalization, "learning," and even "empirical," "validity" and "research" are philosophical in nature. Philosophies are not proved. They are believed.

The upshot of all this looking at ourselves--introspection is also part of the American character--is that philosophies of education can not escape cultural values, just as educators can not escape personal beliefs. What we can do is recognize them and deal with them in our own decision-making. It is not a simple application or mixture from a recipe. What is needed in all of education is a deeper awareness and synthesis of our own philosophical beliefs--whether upstream, downstream or churning both ways.

References

Adams, James Truslow, A Study of Adult Education in a Democracy (New York: Charles Scribner's Sons, 1944).

Cagan, Elizabeth, "Individualism, Collectivism, and Radical Educational Reform," Harvard Educational Review, 48 (1978).

Elias, John L. and Merriam, Sharan, Philosophical Foundations of Adult Education (Huntington, New York: Robert E. Kreiger, 1980).

Evans, J. Martin, America: The View From Europe (San Francisco: San Francisco Book Company, Inc., 1976).

Huizinga, Johan, America: A Dutch Hitorian's Vision From Afar and Near, from Man and the Masses in America (1918 and Life and Thought in America (1926), trans., with an Introduction and Notes by Herbert H. Rowen (New York: Harper and Row, 1972).

King, Edmund J. Other Schools and Ours: Comparative Studies for Today, 4th ed. (London: Holt, Rinehart and Winston, 1973).

Kreitlow, Burton W. and Associates, Examining Controversies in Adult Education (San Francisco: Jossey-Bass, 1981).

Lerner, Max, America as a Civilization (New York: Simon and Schuster, 1957).

Martin, Everett Dean, The Meaning of A Liberal Education (New York: W. W. Norton, 1926).

Steinbeck, John, America and Americans (New York: The Viking Press, Inc., 1966).

Stewart, Edward, American Cultural Patterns: A Cross-Cultural Perspective (Washington, D.C.: Society for Intercultural Education, Training and Research, 1972).

Tocqueville, Alexis de, Democracy in America, Vol II (New York: Vintage Books, 1945).

I. Titre: Développement vocationnel de l'adulte: Cycles de vie au fil des âges

Danielle Riverin-Simard, Ph.D.*
Université Laval.

II. Introduction et cadre théorique

Le phénomène de l'éducation permanente revêt une importance capitale dans notre société actuelle. Il s'avère alors essentiel de connaître cette clientèle, mais la littérature scientifique concernant l'adulte est très limitée par rapport à la somme de connaissances que l'on possède sur l'enfant, l'adolescent et même la personne du troisième âge. La présente recherche** avait donc pour objectif d'identifier des étapes de développement vocationnel de l'adulte afin d'être en mesure de mieux concevoir le phénomène de l'éducation des adultes comme un processus continu basé sur leur dynamique même. D'autant plus que le développement et le perfectionnement d'une carrière est une des raisons majeures qui poussent les adultes à poursuivre leur "éducation".

Quant au cadre théorique, il faut souligner que le modèle de base était intitulé "Vers un modèle en escalier"***; ce modèle se situe tout d'abord parmi les théories développementales du choix vocationnel. Un premier postulat de ce modèle veut que le développement vocationnel se poursuive jusqu'à la mort sous des modalités différentes, mais avec la même intensité. Ce postulat implique bien des aspects. En premier lieu, il signifie que le développement de la période adulte ne peut être perçu comme une période relativement stable suivie de détérioration et d'un déclin. Cela signifie également qu'il s'agit d'un développement qualitativement différent où des changements significatifs interviennent constamment.

Quant à la nature du processus de ce développement, le modèle postule qu'il se réalise par des périodes successives de questionnement et de réorganisation. Durant les périodes de réorganisation où l'individu est engagé dans son cheminement vocationnel, des événements extérieurs interviennent avec l'évolution de son propre monde intérieur (valeurs, intérêts, etc..). Cette interaction "évoluante" entre un milieu occupationnel, lui-même en évolution, et un moi vocationnel également en évolution, amène un début d'inconfort qui se fait graduellement de plus en plus grand. Cet inconfort provoque ainsi une dissonance qui conduit l'individu vers une période de questionnement comportant des choix à reformuler ainsi que des besoins, intérêts et compétences à redéfinir ou à réévaluer en fonction de facteurs de réalité. Les résultats de cette réflexion conduisent peu à peu à une série de nouveaux choix successifs qui rendent l'individu prêt à s'engager dans une période de réorganisation.

De plus, ce modèle se situe dans les théories de développement conçues en termes de stades. Ainsi, il postule une série de périodes spécifiques tout au long de la vie adulte. Les diverses périodes sont des passages privisibles de l'adulte dans sa vie vocationnelle qui donnent un sens, une direction à son évolution ou à son développement. Ce postulat signifie que les diverses périodes ainsi que les tâches inhérentes comportent leurs propres défis et ressources.

---

* Faculté des Sciences de l'Education, bureau 650, Université Laval, Ste-Foy, Québec, G1K-7P4, Canada (418) 656-5729; (418) 653-5970

** Recherche triennale subventionnée conjointement par le C.R.S.H. (Canada, la F.C.A.C. (M.E.Q.), le C.Q.R.S. (M.A.S.), et le B.S.R. (Université Laval).

*** Modèle détaillé, voir Riverin-Simard, D. Développement vocationnel de l'adulte: vers un modèle en escalier. Revue des Sciences de l'Education, vol. VI, no. 2, 1980, 325-351.

III. Méthodologie.

L'échantillon des adultes de 23 à 67 ans a été l'objet d'une stratification a priori selon les variables suivantes: l'âge, le statut socio-économique, le sexe et le secteur de travail. Ainsi les 786 sujets se répartissent comme suit: 23-27 ans (72), 28-32 ans (89), 33-37 ans (72), 38-42 ans (114), 43-47 ans (91), 48-52 ans (91), 53-57 ans (101), 58-62 ans (91), 63-67 ans (65). Il y avait 411 sujets masculins dont 131 appartiennent à la classe socio-économique I (basse), 133 à la classe socio-économique II (moyenne) et 147 à la classe socio-économique III (élevée). Il y avait 375 sujets féminins dont 108 appartiennent à la classe socio-économique I, 152 à la classe socio-économique II et 115 à la classe socio-économique III; 252 sujets travaillent dans le secteur privé, 292 dans le secteur public et 242 dans le secteur para-public.

Quant au devis expérimental*, cette recherche a utilisé une des trois approches développementales, soit l'approche mixte qui emprunte aux méthodes transversale et longitudinale. Cette approche se situe dans le devis expérimental étiqueté par Campbell et Stanley, le devis "recurrent" (the recurrent institutional design), lui-même classé dans les schémas quasi-expérimentaux. De plus, les données furent recueillies au cours d'entrevues semi-structurées. La technique d'entrevue, se situe surtout parmi les interrogatoires indirects ou projectifs et fait appel à trois modes expérientiels soit l'utilisation d'accessoires visuels, la connotation et la figuration.

IV. Résultats et discussions en regard du modèle de base

a) Les aspects divergents. Le modèle de base définit comme premier postulat que le développement vocationnel se poursuit jusqu'à la mort, sous des modalités différentes, mais avec la même intensité. Or, cette conception d'un développement qualitativement différent ne semble pas partagé par environ 85% des adultes. En d'autres termes, il semble y avoir chez ces derniers une acceptation plus ou moins consciente ou imposée d'une conception de leur développement basée directement sur le "modèle biologique de stades". Ce modèle laisse dégager que le développement est sur une pente ascendante jusque vers 35 ans. Il se maintient au même niveau jusque vers 55 ans et il subit un déclin par la suite jusqu'à sa retraite ou sa mort biologique. Par ailleurs, les sujets-exceptions (15%) échappent à cette conception du développement vocationnel et semble davantage correspondre au modèle de base. Ces derniers se perçoivent sur un continuum de développement vocationnel qui se différencie qualitativement tout au long des années. Et, ces sujets-exceptions sont ceux qui arborent un développement vocationnel accéléré visant la réalisation et le dépassement de soi.

b) Les aspects incomplets. En regard de la nature ou du type de questionnement, le modèle se devrait d'être plus explicite. Il y aurait donc lieu de proposer une reformulation allant dans le sens d'une différenciation entre deux types de questionnement et leur alternance au cours des âges, car selon les résultats, les états de questionnement se distinguent comme suit: le premier porte sur les finalités de la vie vocationnelle (28-32 ans; 43-47 ans; 53-57 ans; 63-67ans); le second a trait aux modalités de réalisation des buts occupationnels (23-27 ans; 33-37 ans; 38-42 ans; 48-52 ans et 58-62 ans).

c) Les aspects convergents. Les résultats valident le modèle dans les aspects suivants. Le vécu vocationnel se réalise par des moments de questionnement suivis ou précédés de réorganisation. Il y a une spécificité dans le vécu vocationnel des adultes de chacune des 9 strates d'âge. On indique ici cette spécificité.

---

* Précisions méthodologiques voir: Riverin-Simard, D. Développement vocationnel de l'adulte: méthodologie de la validation d'un modèle. L'Orientation professionnelle, vol. 17, no. 4, 1981, 7-32.

Le discours central de l'adulte de 23-27 ans a trait aux atterrissages sur la planète marché du travail. Cet adulte semble un nouvel arrivant ayant pour bagage toute son histoire personellle (valeurs, aspirations, éducation familiale, formation professionnelle, etc..). Il perçoit un plus ou moins grand décalage entre son identité vocationnelle antérieure et la concrétisation de cette identité en tant que nouveau citoyen de la planète travail. Ce décalage l'amène parfois à ressentir l'urgence de plier bagage et d'effectuer d'autres atterrissages. L'adulte de 23-27 ans cherche à minimiser les effets négatifs de ces manoeuvres d'atterrissage plus ou moins réussies. Il est très vulnérable à l'évaluation d'autrui, mais il cherche à continuer à se laisser guider par ses aspirations idéales ou par ses rêves tout au long de ces déplacements ou de ces nouvelles manoeuvres d'atterrissage. Il se définit actuellement sur une pente ascendante le guidant plus ou moins vers ce rêve.

L'adulte de 28-32 ans est essentiellement à la recherche d'un chemin prometteur. Il s'interroge sur ses buts vocationnels et sur la possibilité de trouver un chemin prometteur leur permettant de se réaliser dans un secteur de pointe. Il se demande: "Quelles sont mes forces, mes capacités et mes compétences qui me permettraient d'avoir accès à ce chemin prometteur? L'adulte de cet âge vit un phénomène de préhension des multiples réalités du marché du travail, de ses règles internes (jeux de coude, avenues ouvertes ou fermées, circonstances favorisantes ou atténuantes, climat socio-politique, etc...) Il cherche maintenant à découvrir, à détecter ou à cerner comment il peut réussir à tirer son épingle du jeu dans cette jungle qu'est le marché du travail. Il est préoccupé à identifier en quoi il serait le plus compétent, le plus habile pour réussir un certain opportunisme d'adéquation entre ses forces et un certain groupe d'emplois ou d'employeurs. Ainsi, l'adulte de 28-32 ans est surtout préoccupé à détecter une modalité de vie vocationnelle qui mettrait à profit son originalité, son unicité dans le contexte socio-économique pour lui permettre d'être sur la voie d'une performance maximale ou à la recherche d'un chemin vocationnel prometteur. Le questionnement de l'adulte de cet âge porte sur les éléments suivants: la prépondérance de ses capacités et compétences sur les intérêts, la recherche d'une reconnaissance sociale, sa valeur occupationnelle réelle, la création de ses propres ultimatums, la hâte de "mettre plain feu", l'accentuation des rôles sociaux, surtout familiaux, etc..

L'adulte de 33-37 ans semble se retrouver bon gré, mal gré, aux prises avec une course occupationnelle. Il semble se percevoir, tout à coup, au sein d'une piste de course où les règles du jeu sont évidemment l'obligation d'avancer selon un rythme accéléré et de surmonter rapidement les obstacles. Le but de cette course serait de réussir à récolter toute une série d'exploits occupationnels pouvant constituer une banque en prévision d'un rendement possiblement moins spectaculaire dans les années à venir ou en prévision d'éventuels échecs. Les exploits vocationnels en droit de trophée s'expriment surtout en termes d'acquis de prestige ou de réussite sociale. Cette course aurait comme effet de maximiser les différences individuelles; la perception des chances de bien se classer va de la plus pessimiste à la plus optimiste. Cette course aurait comme effet de restreindre l'éventail des pistes occupationnelles. Alors qu'à 23-27 ans, la perception du temps se faisait à l'égard du futur à construire, à 33-37 ans, cette perception est marquée par le présent à occuper pleinement. Cette course semble le mener vers un plateau qui lui garantirait un statut occupationnel jusqu'à la retraite. Cette course est vécue comme l'escalade d'une montagne où un véritable répit ou repos signifieraient un recul et même une chute.

Suite à la course vocationnelle de la période précédente, l'adulte de 38-42 ans se retrouve face à une série d'échecs ou de réussites partiels ou totaux. Quelle leçon doit-il tirer de tout cela? Il veut maintenant faire l'essai de nouvelles lignes directrices plus personnalisées et construites à la lumière de ses expériences passées. Un processus de réaménagement des illusions ou de recomposition d'une philosophie de vie devient important. Il s'interroge alors sur son identité occupationnelle, ses valeurs de travail, etc.. Il se demande: est-il encore temps de changer? de quelle manière je veux continuer ma vie au travail? C'est donc un moment névralgique pour faire le point sur le plan occupationnel. Toutes ces questions sont accentuées par la limite du temps et comportent un regard simultané vers le passé, le présent et l'avenir. Cet adulte procède à l'élaboration de ses règles ou lois occupationnelles qui constitueraient sa propre charge vocationnelle. Les lignes directrices adoptées couvrent une gamme très variée allant des plus défaitistes et tolérantes aux plus optimistes et pro-actives. De plus, étant encore sur l'élan de sa course de la période précédente, l'adulte de 38-42 ans semble avoir peu de temps pour réfléchir sur la nature des nouvelles lignes directrices choisies à la hâte. Son but prioritaire est de procéder immédiatement à l'essai de ces nouvelles lignes.

L'adulte de 43-47 ans semble être en quête du fil conducteur de son histoire occupationnelle qui expliquerait son vécu passé, présent et à venir. Il s'interroge sur la cohérence de ses buts vocationnels, sur la synthèse de son identité occupationnelle ainsi que sur le réel apport ou enjeu des divers moments de cette histoire sur sa destinée toute entière. Cet adulte sent un véritable besoin de réintégrer tous les éléments de cette histoire. Il veut préciser les finalités qu'il entrevoit pour sa destinée tout en étant conscient du poids de son passé. Pour être en mesure de procéder à ces réflexions très exigeantes, on a parfois l'impression que cet adulte a installé un pilote automatique. Il a acquis suffisamment d'expérience pour éviter d'être trop impliqué émotivement dans ses activités occupationnelles. Avec le pilote automatique, il se libère ainsi du quotidien et est plus disposé à dégager ce fil conducteur. Il y a une prospection de son passé grâce à des têtes-à-têtes reconnaissants ou improbatifs avec un interlocuteur invisible, mais implacablement présent qu'est le changement. La prospection du fil conducteur révèle des suivis ayant une gamme très variée; ils sont plus ou moins décroissants ou progressistes.

Après avoir été en quête du fil conducteur de son histoire, l'adulte de 48-52 ans veut procéder à une modification de sa trajectoire. Il est maintenant en possession d'une banque de données sur l'évolution de son identité vocationnelle et du monde occupationnel. L'intégration de ces données l'amène à ressentir le besoin de modifier son agir vocationnel. Il veut maintenant utiliser toutes ces données pour réorienter sa trajectoire vers un compromis pouvant respecter l'ensemble des exigences de ces coordonnées. D'autres éléments typiques à cet âge, contribuent au dispositif d'une modification de sa trajectoire. Il se perçoit aux confins de la jeunesse et de la sagesse. Il a une connaissance de soi relativement éprouvée. Il sent tournoyer le fantôme de la maladie mais la santé n'en est que plus appréciée. Ces modifications de la trajectoire revêt diverses intensités. Elles sont subtiles en ce sens qu'il y a permutation des valeurs où la préoccupation altruiste devient prioritaire à la nature des tâches occupationnelles. Ces modifications sont également modestes (insertion de mini-nouveautés), manifestes (changement notable), irréalisables (présence d'obstacles insurmontables) ou ajournées (remises à la période de la retraite).

Après avoir été aux confins de la jeunesse et de la sagesse, l'adulte de 53-57 ans semble tout à coup se situer abruptement dans une recherche d'une sortie prometteuse du marché du travail. Malgré l'abolition de l'âge obligatoire de la retraite, cet adulte semble considérer qu'il vit une dernière étape avant le compte à rebours de son départ. Cette situation lui provoque des questions très angoissantes sur la présence de la mort, la finitude de la vie en général et surtout de sa vie en particulier. Il contient mal son agressivité lorsqu'on lui parle de son avenir immédiat. Il se pose les questions suivantes: comment sortir élégamment de la planète marché du travail? Comment souligner mon apport spécifique? Comment faire remarquer que je suis difficilement remplaçable? Il y a des recherches désespérées (la sortie est synonyme de déchéance et d'humiliation), externes (attente vaine du couronnement par autrui de ses efforts), calmes (on savoure les dernières années de travail), actives (on s'affiche soi-même, avec parfois de l'arrogance, comme ayant été un excellent contributeur), privilégiées (on entraîne une équipe qui poursuivra son travail). L'évaluation d'autrui, valable seulement pour le rendement actuel, revêt une importance exagérée; il interprète cette évaluation comme étant celle de l'ensemble de sa carrière.

L'adulte de 58-62 ans souligne que la période précédente a été très difficile mais que maintenant il a réussi à se consoler en s'apprivoisant avec l'idée de la retraite ou de la mort. Il procède à un transfert de champ gravitationnel et il l'effectue différemment. Ou bien, il se situe face au marché du travail et s'interroge sur les moyens de s'y accrocher ou de s'en détacher, ou bien il se situe face à la retraite et il cherche des moyens de retarder son approche ou de devancer l'échéance. Il fait des réflexions-testaments i.e. il fait une donation de ses lignes directrices vocationnelles, composées dès 38-42 ans et éprouvées par la suite. Il nous lègue sa charte vocationnelle en héritage. Les réflexions léguées portent sur la nécessité de différents aspects tels: effectuer des défis, avoir l'impression d'un certain degré de liberté au travail, reconnaître en l'expérience une composante essentielle de la sagesse, avoir un esprit de combativité inlassable, repenser sa vie et la revivre chaque jour. Le transfert de champ gravitationnel s'accompagne de divers états d'âme. Chez la majorité, il y a une grande assurance, une certitude de posséder un équilibre émotif supérieur; il y a une perception de soi comme étant plus humain, plus épanoui, plus vivace d'esprit et ayant une plus grande capacité d'adaptation.

L'adulte de 63-67 ans est vraiment aux prises avec la gravité vocationnelle de la planète retraite; il ne peut y échapper à brève échéance. Il a différentes réactions. Il y a un refus où on essaie de neutraliser l'effet de cette gravité. Il y a une perception de l'héritage reçu lors du passage sur la planète marché du travail (compétences développées, identité caractérisée, approvisionnement monétaire, etc...). Enfin, il utilise parfois cette gravité pour continuer son développement vocationnel d'une façon remodelée, adaptée (changement de travail ou modification des horaires de travail). L'adulte de cet âge laisse observer d'autres comportements parallèles. Il y a substitution de la notion de rendement par celle d'utilité personnelle et sociale. Il est question des problèmes de survie biologique, économique et vocationnelle (comment s'occuper lors de la retraite). L'adulte de cet âge est aux prises avec une course de réflexion vocationnelle. A 33-37 ans, il y avait eu une course d'agir vocationnel; à 63-67 ans, l'adulte semble pressé de se "bercer" pour pouvoir réfléchir ou jongler. Il semble hanté par un besoin insatiable d'avoir une action intérieure très intense. Les réflexions portent sur divers thèmes tels la vie, la mort, la réussite, la vieillesse, la critique des actions de sa génération en tant que pionniers de la génération subséquente.

V. Implications

Etant donné que l'adulte semble en constant questionnement tout au long des années, il y aurait peut-être lieu de distancier les notions de maturité et de stabilité. Autrement dit, il faudrait interroger sérieusement l'adage voulant qu'un être mature soit un être stable. Au contraire, un certain état d'instabilité (questionnement) ne serait-il pas une garantie d'un développement personnel continu? De plus, la conception "biologiciste" du développement (i.e. croissance jusque vers 35 ans, maintien de 35 à 55 ans et déclin de 55 ans à...) ne serait-elle pas un des facteurs de la moyenne d'âge si peu élevée dans les activités institutionnalisées de l'éducation des adultes?

ADULT DEVELOPMENT AND ADULT BEGINNING READING BEHAVIORS

Sally Schumacher, Ph.D.
Virginia Commonwealth University

INTRODUCTION

One of the most striking observations of adult beginning reading classes is the wide range of ages found in a single instructional situation. In a nine-month ethnographic study of four adult beginning reading classes in several learning centers, two research questions were investigated: 1) do differences in ages from the teens through the forties indicate differences in adult development among adult beginning readers (ABR's) and 2) how does the developmental phase of an adult effect his/her behaviors and attitudes in the learning-to-read process? The study suggests implications for effective instruction and further research.

Behaviors and attitudes were analyzed with the conceptual frameworks of adult consciousness (Gould, 1978), adult development (Levinson, 1978, and Tittle and Denker, 1980), and life span developmental psychology (Neugarten, 1968, and Kuhlen, 1968). The findings qualitatively related the phase of adult consciousness and adult development among these adults to the dominate motivation for learning-to-read behaviors. Four types of reading behaviors emerged from the data: inconsistent, minimal, regressive, and progressive.

ETHNOGRAPHIC METHODOLODY

Data were collected, using ethnography (Schumacher, 1979, 1981) by a research team for An Ethnographic Study of Adult Beginning Readers Project, funded by the Adult Education Services of the Virginia Department of Education. Ethnography in this study has three characteristics: 1) a case study design which focused on the learning-to-read process of adults in beginning reading instructional situations, 2) qualitative analysis of the multiple sources and kinds of data, and 3) field research to observe more directly the complexity of reality without reactive effects and threats to internal validity often associated with experimental treatments. Ethnographic procedures involved selecting and training a research team, gaining access and acceptance in the field, holding weekly staff meetings and seminars to identify multiple research roles and evolving foci, and establishing a valid data base. Validity of the data base was achieved by nine months of on-site observations, extensive field notes by a four member research team, and use of multiple methods, participants, situations, and organizations.

Sally Schumacher is Associate Professor in Educational Studies, Virginia Commonwealth University, School of Education, Richmond, Virginia 23220.

Data was presented as Adult Snapshots and Adult Sketches (Boraks and Schumacher, 1981,Chapter 5). Fourteen adults were selected from over 60 ABR's observed in the ABR classes for this analysis. Ethnographic data were sufficiently indepth to identify reading behavior and attitude patterns and adult developmental phases. An Adult Snapshot combined several sources of data from observations of the instructional process. An Adult Sketch analyzed the adult from the conceptual frameworks. Sources of the data for the Adult Sketch were: enrollment records; interviews with teachers, tutors, and staff; conversations with the adult; observations during the academic year, and the periodic research team discussions of each adult.

FINDINGS

The findings are summarized in the chart below (Boraks and Schumacher, 1981, p. 230). The chart is the reference point for this discussion. All names have been coded.

ADULT DEVELOPMENT AND GENERAL READING BEHAVIORS OF ABRS

Name & Age	Adult Consciousness (Gould, 1978)	Adult Development		Dominant Motivation (Kuhlen, 1968)	General Reading Behaviors
		Men (Levinson, 1978)	Women (Tittle & Denker, 1980)		
Jim, 18	16-22 tasks	Early Adult Transition	N.A. (not applicable)	Anxiety goal diffused	inconsistent
Betsy, 21	16-22 tasks	N.A.	Premarriage	Anxiety goal diffused	minimal
Lonnie, 22	16-22 tasks	Early Adult Transition	N.A.	Growth-expansion	regressive
Rick, 22	16-22 tasks	Entering the Adult World	N.A.	Growth-expansion	progressive
Mike, 23	16-22 tasks	Entering the Adult World	N.A.	Growth-expansion	progressive
Casey, 23	16-22 tasks	Early Adult Transition	N.A.	Anxiety	minimal
Joan, 25	16-22 tasks	N.A.	Premarriage	Anxiety	progressive
Carol, 27	22-28 tasks	N.A.	Multiple roles	Anxiety	minimal
Horace, 27	28-34 tasks	Thirties Transition	N.A.	Anxiety	minimal
Curl, 27	28-34 tasks	Thirties Transition	N.A.	Growth-expansion	minimal
Joy, 32	28-34 tasks	Thirties Transition	Multiple roles	Growth-expansion	progressive
Alice, 35	28-34 tasks	N.A.	Multiple roles	Anxiety	regressive
Patrick, 42	22-28 tasks	Thirties Transition	N.A.	Anxiety	minimal
Annie, 43	28-34 tasks	Thirties Transition	Multiple roles	Growth/Anxiety	inconsistent

1. Two distinct phases of adult consciousness (Gould, 1978) emerged among these 14 adults. Both males and females, aged 18 to 25 years, were working on developmental tasks found in ages 16-22 in Gould's study. The older adults, ages 27-43, were working on developmental tasks found in ages 28-34, with two exceptions. Carol, 27, and Patrick, 42, seemed to concentrate on the tasks found in ages 22 to 28. Among these adults, aged 18-43, three phases of adult consciousness were discovered, with most adults trying to resolve childhood assumptions found operating at ages 16-22 and 28-43.

2. A second pattern among these adults appear in the phases of adult development as suggested by Levinson's study (1978) and Tittle and Denker's (1980) synthesis of research. Among these adults aged 18-43, three developmental phases are evident: Early Adult Transition, Entering the Adult World, and the Thirties Transition. Generally, the younger group had more variance.

3. A third pattern is the difference between men and women in adult development. Tittle and Denker's review of the research (1980) suggests that theories of adult development based on research on men do not account for the phases of adult development found in women. The data confirm Tittle and Denker's interpretation for the younger group, but raise further questions for the older group of women. In the younger group, the behaviors of Betsy, 18, and Joan, 25, did not fit most of the developmental tasks Levinson found in his sample of 40 men. Betsy and Joan, both exhibiting similar phases of adult consciousness, could best be described as in a premarriage period, with expectations that marriage would be a full-time occupation. However, all of the older group of women--consisting of Carol, 27, Joy, 32, Alice, 35, and Annie, 43--demonstrated multiple roles and conflicts among the roles of spouse, parent, worker, and student, as suggested by Tittle and Denker. Two women, Joy and Annie, also exhibited behavior in the Thirties Transition which Levinson found in his study of men. These two women, in their decision to enter a basic reading program, were trying to "better themselves," i.e., to acquire skills that could ultimately result in a change of life structure--or, as Levinson put it, another season of life. Levinson found that all members of his male volunteer sample progressed through adult phases in order. The findings in this study suggest that some beginning adult women readers can experience a Thirties Transition in which forming a dream, developing mentor relationships, establishing an occupational goal, and changing love relationships are interpreted in terms of an educational goal, i.e., learning to read.

4. The phase of adult consciousness relates in general to the phase of adult development. There is more variance among the younger adults (18-25), whose adult consciousness was challenging the omnipotence of parents and forming identity. Some of the younger adults were in the Early Adult Transition, and some had Entered Adult World by making initial choices to build a life structure. The older adults--with two exceptions (Carol, 27, and Patrick, 42)--were in the Thirties Transition and simultaneously resolving the adult consciousness tasks associated with ages 28 to 34.

5. An important finding not reflected in the Chart is the complexity within the phases of adult consciousness and adult development. In an attempt to find patterns, the researcher analyzed the dominant tasks of each adult within each phase. Thus, the three adults who were Entering the Adult World were working on different developmental tasks. A similar pattern was

found among the five adults in the Thirties Transition. This pattern was also found when using the components of the childhood assumptions to identify the phase of adult consciousness.

6. There is no pattern in the relationship of age, adult consciousness, adult development, and dominant motivation for learning-to-read. The dominant motivation of anxiety and frustration occurred in all phases of adult consciousness and adult development. Further, the dominant motivation became more frustrating. This is not surprising, since the longer the adult attended the class, the more reality-based became his or her assessment of the requirements to meet the original goal of learning-to-read.

7. There was no pattern in the relationship of age, phase of adult consciousness, phase of adult development, dominant motivation, and reading behaviors in the group. These adults exhibited four kinds of general behavior in learning to read: inconsistent, minimal, progressive, and regressive. Inconsistent behavior occurred in two phases of adult consciousness and in three phases of adult development. Regressive behavior occurred in two phases of adult consciousness and in two phases of adult development.

In summary, the concepts of phases of adult consciousness, phases of adult development, and dominant motivation are not directly related to the general reading behaviors of these adults as a group. Other variables that might directly affect reading behaviors were hypothesized, such as the materials and the teaching procedures. It is hypothesized that the tasks of adult consciousness and adult development affect teacher decision-making about materials and teaching procedures, which in turn might affect reading achievement directly.

However, when the analysis is shifted from the group to the individual, then a relationship between the developmental task of a phase and reading behaviors provides more explanatory power. When learning-to-read was an integral part of a developmental task of an adult, the adult showed progressive reading behaviors. When learning to read was not a major focus of a developmental task, the adult exhibited inconsistent, minimal, or regressive reading behaviors. Further, in resolving a developmental task in which reading was central, an adult could exhibit a growth-expansion or an anxiety-frustration motivation.

This study suggests that the age of an adult is not enough to identify the phase of adult development or adult consciousness. Adult beginning readers have more variability than was found by Gould (1978) or Levinson (1978), whose participants were adult readers. Women's adult development among these beginning readers differs qualitatively from men's adult development, as hypothesized by Tittle and Denker (1980). Further, this study supports Kuhlen's (1968) postulate that both growth-expansion and anxiety-frustration can serve as the dominant motivation in a developmental task related to reading.

Perhaps this analysis illustrates the conclusion of Robert C. Peck (1968) in discussing the use of developmental criteria rather than age criteria for the study of phases in later life:

> There is a greater variability in the chronological age at which a given psychological crisis arises in later life, than is true of the crisis-points of youth . . . . In studying children, at the pre-pubertal stage, we can almost take it for granted that they are almost working on the same total set of developmental tasks. With adults, the pattern of developmental tasks can vary more greatly, from one individual to another. (Peck, 1968, p. 92.)

IMPLICATIONS

Recognizing the limitations of ethnographic research and the exploratory nature of the study, what are the implications for instruction?

1. Knowledge of the general phase of adult consciousness and adult development can provide the adult reading teacher with a deeper understanding of the behaviors that a beginning adult reader exhibits in the learning-to-read process. The age of an adult provides one indicator of phase of adult development or consciousness, but other information is needed. In addition, the developmental phases of women appear to differ from those of men.
2. An understanding of the behaviors related to adult development may aid a teacher in making decisions related to materials and instructional procedures. A teacher decides which adult behaviors are responded to and reinforced and which behaviors are ignored. A teacher could relate the importance of learning-to-read to an individual's developmental task. A teacher may be able to recognize more easily the adult's "readiness to learn" and the "teachable moment" (Havinghurst, 1961). Through this approach a teacher may foster attitudes and behaviors that promote attendance and achievement.
3. It is important to identify whether the dominant motivation for learning-to-read is anxiety-frustration or growth-expansion. A teacher's procedure with a student motivated by anxiety-frustration would differ from his or her procedure with a student motivated by growth-expansion. One of the keys to helping adults learn-to-read is knowing how much frustration each student can handle.
4. Because of the wide variations among phases of adult development and adult consciousness, it seems beneficial that adults receive both group instruction and individual instruction. However, many factors will influence the allocation of instructional time (Merizow, Darkenwald, and Knox, 1975; Bowren and Zintz, 1977; Karnes, Ginn, and Maddox, 1980).

The findings of this study suggest tentative implications for further research.

1. There may be greater variability in adult consciousness among adult beginning readers than was found in Gould's study (1978) of patients and nonpatients, male and female. Because Gould's findings in patients were verified by survey research, the results are relevant for reading adults.

2. There may be greater variability in male adult development among adult beginning readers than was found in Levinson's study (1978) of 40 men. Although not all of the men in his research graduated from high school, it is implied that all of them could read.

3. Female adult development differs qualitatively from male adult development among ABRs. This finding supports those of Tittle and Denker (1980). Further research in vocational development among women ABRs is needed.

4. This study supports Kuhlen's (1968) postulate that anxiety-frustration can serve as a dominant motivation in adult development.

5. The phase of adult consciousness among these ABRs parallel the phases of adult development with some exceptions.

REFERENCES

Boraks, N. and Schumacher, S. Ethnographic research on word recognition strategies of adult beginning readers. (Tech. Report) Richmond, Virginia: Virginia Commonwealth University, 1981.

Bowren, R. R. and Zintz, W. V. Teaching reading in adult basic education. Dubuque, Iowa: William C. Brown Co., 1977.

Gould, R. L. Transformations: Growth and change in adult life. New York: Simon and Schuster, 1978.

Havinghurst, R. J. Developmental tasks and education. New York: David McKay, 1961.

Karnes, F. A., Ginn, G. H., and Maddox, B. B. Issues and trends in adult basic education: Focus on reading. Jackson, Miss.: University Press of Mississippi, 1980.

Kuhlen, R. G. Developmental changes in motivation during the adult years. In B. L. Neugarten (ed.) Middle age and aging. Chicago: University of Chicago Press, 1968.

Levinson, D. J. The seasons of a man's life. New York: Knopf, 1978.

Mezirow, J., Darkenwald, G. G., and Knox, A. B. Last gamble on education: Dynamics of adult basic education. Washington, D.C.: Adult Education Association of the U.S.A., 1975.

Neugarten, B. L. Toward a psychology of the life cycle. In B. L. Neugarten (Ed.) Middle age and aging. Chicago, University of Chicago Press, 1968.

Peck, R. C. Psychological development in the second half of life. In B. L. Neugarten (Ed.) Middle age and aging. Chicago: University of Chicago Press, 1968.

Schumacher, S. Ethnographic inquiry: Theory and application in educational research and evaluation. Richmond, Virginia: Virginia Commonwealth University, 1979. (ERIC Document Reproduction Service No. Ed 184 108).

Schumacher, S. and Boraks, N. Culture shock: Evolving ethnographic procedures to study adult learning-to-read behaviors. Richmond, Virginia: Virginia Commonwealth University, 1979. ERIC Document Reproduction Service No. ED 207 007).

Tittle, C. K. and Denker, E. R. Returning women students in higher education. New York: Praeger, 1980.

QUALITATIVE DIFFERENCES BETWEEN FIELD DEPENDENT AND FIELD INDEPENDENT NURSING STUDENTS' PERCEPTIONS OF LEARNING EXPERIENCES AND LEARNING PATTERNS

Edwin L. Simpson* and Susan Noble Walker

Introduction. From the growing body of literature concerning cognitive style, a picture has emerged of differences in the social and cognitive characteristics of field dependent and field independent people. Field independent (FI) people rely more on internal referents and have greater cognitive restructuring skills, while field dependent (FD) people rely more on external referents and have greater interpersonal skills (Witkin & Goodenough, 1981). The applied research that has been done suggests that FD and FI learners naturally prefer certain approaches and environments, but are capable of learning to use alternative strategies more appropriate to particular tasks and circumstances (Witkin, Moore, Goodenough, & Cox, 1977).

Field dependent learners, for example, require greater external structuring of learning situations and greater direction from the teacher, and learn best when content is organized in smaller units. They prefer to learn with others and learn best when frequent feedback from the teacher and their peers is provided during learning. They like to see skills demonstrated and are more likely to model or copy teacher behaviors in their own performance. In contrast, FI learners are able to structure their own learning situation if necessary, are more self-directed as learners, and learn equally well whether content is organized in larger or smaller units. They prefer to learn alone and like to have feedback from the teacher when learning has been completed. They don't care whether skills are demonstrated or not and are less likely to model or copy teacher behaviors in their own performance.

Recent literature has advocated immediate application of current knowledge about the relationship between cognitive style and learning in adult continuing education and higher education settings (Messick, 1976; Even, 1982). Some of the recommended applications have far-reaching implications for program design, instructional delivery, and student counseling. Considering the tentative nature of present knowledge from a relatively small number of applied studies with adult populations, it seemed that further investigation of the relationship between field dependence-independence and learning was warranted. In particular, more knowledge was sought in regard to learners' insights into their own learning experiences and patterns.

The purpose of this study was to investigate qualitative differences in the learning experiences and learning patterns of FD and FI nursing students. It focused on the nature of learning experiences identified as significant, the characteristics of learning processes and learning environments described, and the images of self as a learner reflected in students' self-reports.

Methodology. The research design was descriptive. Subjects included 11 FD and 11 FI students nearing graduation from an associate degree nursing program in a midwestern community college. The individualized program in which they were enrolled has a modular curriculum delivery system which provides clear

---

*Leadership and Educational Policy Studies, Northern Illinois University, DeKalb, IL - 60115

statements of learning objectives, allowance for alternative learning methods, and frequent feedback about learning via mastery tests. Active learning and self-direction are valued by the faculty, and group discussions are held instead of lectures. Subjects were selected on the basis of having scored in the lower and upper quartiles on the Group Embedded Figures Test (GEFT) (Witkin, Oltman, Raskin & Karp, 1971) among nursing students who had participated in a previous study by Walker (1981). Field dependent students had GEFT scores ranging from 2 to 5, and FI students had GEFT scores ranging from 13 to 18.

The method of data collection was a structured interview, using a modified form of the Adult Learning Interview Schedule (ALIS) developed by Simpson (1981) and a chart of characteristics of FD and FI learners compiled from the literature. Interviews were conducted face-to-face and were recorded on audiotapes with the permission of the interviewees. The interviewer was unaware of which students were FD and which were FI as measured by the GEFT. To achieve an openness of response and to center on successful learning episodes, each student was asked to focus on a single significant learning experience during the past 2 years as she responded to questions on the ALIS. While the 2 year time period corresponded with students' enrollment in the nursing program, the experiences which they initially selected to focus on included some which had occurred within the context of their personal rather than their academic lives. At some point in the interview, however, all students talked about their learning experiences within the nursing program. At the conclusion of the interview, students were shown the chart of FI and FD learner characteristics (unlabeled) and asked to select the overall description which was most like them as a learner. After making that selection, they were further asked to choose the set of statements within that description which was most true of them, and the set which was least true of them.

Data analysis involved review and content analysis of the audiotape recordings of the interviews. Each student's testimony about her learning in response to the ALIS was analyzed according to the 1) nature of the significant learning experience and learning approach described, 2) evidence of six categories of learning behaviors described in the literature as typical of FD and FI learners, and 3) self-concept as a learner revealed. The frequency of FD and FI learner descriptions selected at the conclusion of the interview was tabulated. In addition, both researchers' perceptions of the FD or FI learner characteristics evidenced in student testimony were examined for consistency with each other and with the students' own perceptions of learner characteristics as evidenced by the descriptions selected. All three of these interpretations were examined for consistency with students' cognitive style classification according to GEFT scores.

Findings. The FI student generally characterized her significant learning experience as one in which she had a sense of achievement, whereas the FD student typically viewed the experience as a revelation of personal potential and an affirmation of her adequacy as a person and a learner. Four of the FI students described significant affective learning (insight into behavior, communication skills, compassion and understanding); three described cognitive learning (2 how to direct own learning associated with greater confidence and 1 specific factual content); three described the learning of a psychomotor skill. Seven of the FD students described significant cognitive learning (6 new study habits or problem-solving skills associated with greater self-assurance, and 1 specific factual content); four described a situation that made an impression on them, but did not elucidate the nature of their learning.

When asked to describe the pattern or series of steps associated with their significant learning, FI learners were better able to identify a pattern. FI students pointed to self-study as being part of an effective pattern of learning for them, and viewed reading as the most helpful resource. In contrast, the FD students preferred structured presentations of a non-print nature (lecture or audiovisual programs) prior to their reading.

When interpersonal versus analytical orientation of research participants was analyzed, both FI and FD students responded in ways characterized in the literature. This was particularly apparent as they revealed greater and lesser analytical skills. While seven of the ten FI students described an analytical/logical/scientific process as characteristic of their learning, none of the FD students described themselves in this way, nor could they identify a pattern or describe a sequence to their learning. Four of the FI students talked specifically about their disembedding ability - ease of being able to select out important or appropriate information on a test, in a clinical situation, or from reading. In contrast, five FD students described difficulty with disembedding within the same context.

Differences were also apparent in the extent of their interpersonal orientation. Only one of the FI students revealed evidence of established interpersonal skills (closeness with people, warmth and compassion), whereas six of the FD students cited the importance of warmth and friendliness of teachers and peers to their learning and valued the opportunity to share feelings with others.

The nursing program in which participants were enrolled during the 2 year period was highly structured. Generally, however, they did not perceive it as such. Although there were no lectures, students were expected to participate actively in group discussions and in simulated and clinical laboratory situations and to prepare for these experiences by reading, viewing audiovisual media, and practicing skills they were learning. Both FI and FD students seemed generally consistent with the literature relative to structure and direction. FI students preferred self-directed learning, and found greater ability in this area to be a desirable outcome of the program for themselves. FD students expressed a desire for greater direction from the teacher, and saw themselves as adapting to or tolerating the "forced active learning" in the program. They also expressed a need or preference for external structuring of their learning situations, whereas FI students did not express such a need.

During the interview, four of the FI students gave examples or stated a preference for structuring their own learning situations, while one referred to the use of external structuring and five made no reference to the subject. Seven of them responded to the descriptions presented at the end of the interview uniformly by choosing "able to structure own learning situation if necessary" as most like them or "require greater structuring of learning situations by the teacher" as least like them. Among the FD students, ten referred to the use of and/or need for external structuring of learning situations during the interview. The learning organizers used by these students included the modules, lectures (comments ranged from "they help me a lot" to "without them, I don't know which way to think"), and mastery tests.

Comments from FD students suggested a strong need for external direction. Nine of this group expressed a desire for more direction from the teacher, or described themselves as passive learners or externally motivated (comments included "we taught ourselves, which was very difficult", "if I was more motivated by the instructors, I would have achieved higher grades", and I accepted self-direction "only for survival"). Seven of the FI reported learning to be more self-directed as a desirable outcome of participation in the nursing program, whereas only two FD students reported that learning to be more active or independent in learning was a desirable outcome.

Narrative from the interviews that dealt with students' perceptions about the amount of learning material revealed some differences between groups. FD students appeared to be much more aware of and concerned about the amount of material to be learned in the program than were FI students, as might be expected from reading the literature. Field dependent students reported greater difficulty in disembedding and a greater need for repetition or reinforcement, either or both of which may have contributed to their concern about the volume of content and the time required for learning. Only one of the FI students expressed concern about the amount of information to be learned within a short time, while six of the FD students expressed such a concern. Five of the FD students described the importance of repetition or reinforcement as essential to their learning (e.g., reading over material more than once or needing multiple exposures to audiovisuals, reading, and discussion). The interview commentary portrayed the FD nursing students as devoting much time to study, even to the extent that it was the dominant activity in her life.

When significant learning of participants was analyzed according to that which was experienced alone or with others, FD students were evenly distributed within the two categories. Field independent students, on the other hand, predominantly identified significant learning (8) which was experienced alone. In contrast, when students were asked about their preference of learning alone and with others, FD and FI students responded similarly. An equal number responded "alone", "with others", or gave mixed response.

Nine of the FD and seven FI student nurses made reference during the interviews to use of feedback in their learning. There was not sufficient information, however, to determine whether they preferred to receive feedback during or at the completion of learning episodes.

Although the literature suggests that FD students like to see skills demonstrated, while FI students don't care whether they are demonstrated or not, no difference was found between FI and FD students, with both groups generally expressing a preference for skill demonstrations by their instructors. Seven students in each group expressed a desire to see skills demonstrated.

A difference in response that seemed to distinguish FD from FI nursing students was how they perceived themselves as learners. In the interview, students were asked their view of what the significant learning experience they described meant to them. Generally FD students viewed the outcomes of the experience to be proof to themselves that they could learn, an ability they were previously doubtful about. FI students, on the other hand, viewed the experience as another success in a string of academic pursuits -- reinforcement of the ability they had demonstrated in the past.

Discussion. One observation that seems apparent from this study is that what nursing students perceived to be significant in their learning, in many instances, were skills that did not come naturally to their own style. For example, several FI students identified interpersonal experiences as being most important to them, whereas FD students identified acquisition of cognitive competencies as most significant. Each group apparently found learning skills that complemented their style to be of most value.

In analyzing characteristic behaviors and patterns in learning as described by participants, one conclusion points to FD students' need for external structure and direction. Field dependent student nurses in individualized programs such as the one described in this study, need more structure and direction externally provided than do FI students. Also, FI students benefit more in increasing their competence of self-direction from participation in programs of this type, than do FD students. If this conclusion accurately reflects results of individualized nursing education experience, then programs of this nature may lead to added frustration for the FD learner, unless they are assisted in learning how to learn as part of the program.

A third conclusion focuses upon the concern FD participants expressed about the volume of learning material and limited time for learning. Very likely the difficulty of disembedding, in addition to a need for external structure, inhibits the FD student in her learning pursuit. It then follows that presence of this condition contributes to frustration and anxiety when large units of material are to be learned in a limited time frame. Also, the FD student sees repetition and reinforcement to be essential to her learning. Opportunities for repeating and reinforcing, of course, are reduced when large amounts of learning material are to be consumed in limited time. All of this seems to suggest an endless cycle that can lead to potential failure.

The implication is that FD students need personal contact and support from faculty and help in "learning how to learn." There is evidence that FD students are helped more by having a variety of activities and that feedback from testing is helpful. Also, flexible pacing within the program may be desirable, given the FD students' response to time and volume of learning material.

A fourth conclusion results from an analysis of participants' self-concept as a learner and identification of weaker concepts among FD students. The facilitator should be cognizant of the achievement orientation of the FI student, in contrast to the affirmation of learning potential that distinguishes the motives of FD learners. A difference in approach seems essential to maximize learning within each group.

References

Even, M. J. Adapting cognitive style theory in practice. *Lifelong Learning: The Adult Years*, 1982, *5* (5), 14-17, 27.

Messick, S. *Individuality in learning*, San Francisco, Jossey-Bass, 1976.

Simpson, E. L. *A study of learning strategies used by cognitively field-dependent academically successful mature learners*. Paper presented at the 22nd Adult Education Research Conference, DeKalb, Illinois, April 1981.

Walker, S. N. The relationship of field dependence-independence to learning approach and achievement of associate degree nursing students (Doctoral dissertation, Northern Illinois University, 1981). *Dissertation* Abstracts International, 1981, *42/06A*, 2444. (University Microfilms No. 81-22251)

Witkin, H. A., and Goodenough, D. R. *Cognitive style: Essence and origins*. New York: International Universities Press, 1981.

Witkin, H. A., Moore, C. A., Goodenough, D. R., and Cox, P. W. Field-dependent cognitive styles and their educational implications. *Review of Educational Research*, 1977, *47*, 1-64.

Witkin, H. A., Oltman, P. K., Raskin, E., and Kays, S. A. *A manual for the embedded figures tests*. Palo Alto, California: Consulting Psychologists Press, 1971.

Correlating Ego Identity Development With Cognitive Processes Used in Question Formation

Markley Smith*
Department of Human Development Studies
College of Education and Social Services
University of Vermont

Introduction

Since Erikson's original formation (1950, 1956), the concept of identity has influenced not only the psychology of adolescence, but a broad range of disciplines in the social sciences and humanities. In the past 20 years more than 65 empirical studies have created ways to operationalize the concept of identity and investigate its personality, behavioral and cognitive correlates.

A complete classification of the concept of identity is beyond the scope of this short paper; the concept is difficult to define because Erikson's concept is inclusive and complex. One effective way of understanding identity, that informs this research, is by conceiving identity as a "self structure." Erikson explains identity as having an organization or a structure. Structure then is a "complex configuration of skills, needs, capacities, identifications and defenses." James Marcia (1980, p. 159) defines a healthy identity structure as self aware, flexible and dynamic. Marcia construes identity structure developing as the individual participates in the process of making authentic and significant choices. The process of making choices (e.g., an academic major) is not done by a healthy person neatly, but rather in a lurching bit by bit process because many choices have to be made and remade, e.g., the choice to committing oneself in a relationship. Choices may seem insignificant at the time--e.g., who to date, how to vote, what to study. But over time decisions begin to accumulate into a stable internal network of defining characteristics. This, then, is an identity structure. This structure of decisions then becomes a solid frame of reference for experiencing reality and making subsequent decisions. From a learning perspective it is the identity structure in which learning of any kind is mediated. Persons assimilate information in juxtaposition to the meaningful choice processes that they are in.

The research on the identity construct (for a more comprehensive review of the identity literature see Marcia, 1980 and Bourne, 1978) indicates strong correlations between persons who have a high identity status and: non-authoritarianism (Podd, 1972); cognitive complexity (Kirby, 1977); autonomy (Orlofsky, Marcia & Lesser, 1973); moral reasoning (Hayes, 1977); intimate interpersonal relationships (Orlofsky, Marcia & Lesser, 1973); facilitative counseling styles (Neuber & Genthner); self-ideal similarity (Marcia, 1967); flexibility in the college experience (Waterman & Goldman, 1976); and reflectiveness (Waterman & Waterman, 1974).

In conclusion, the concept of identity has proven to be clinically and theoretically useful particularly in studying personality development in adolescence and young adults. It is a concept that can be reasonably well measured and the identity literature is well developed with ample relationships

---

*The author wishes to acknowledge the help and counsel of the following persons: John Clarke, Ellen Fraser, Tom Kennett, Herman Meyers, Mary Ellen Stowell and Kelley Turcotte. (Author's address: 533 Waterman, UVM, Burlington, VT 05405)

to constructs in other theoretical systems (e.g., cognitive psychology). The case can be made that persons "do better" with themselves, others and society when they have obtained the higher statuses (moratorium and achievement). However, to date identity has not been systematically studied in the context of learning, thus, some important research can and should take place in this area.

The Problem: Understanding Identity As A Variable In The Learning Process

Many learning theorists consider personality patterns as key variables influencing the learning process (e.g., Ausubel, Novak & Hanesian, 1978). Arthur Chickering in Education and Identity developed a multidimensional model for adult learning which theorizes that identity is a core aspect of the self by which learning of any kind is mediated. The problem is that multidimensional concepts appeal to common sense, but in spite of the fact that there has been abundant research on identity there have been very few studies that systematically investigate the relationship between differentiated levels of ego identity development and thinking patterns employed in academic settings. Such investigations are important because identity may prove to be a significant independent variable affecting cognitive activities in the learning environment. In summary, educators need to learn more about how identity patterns interact with formal academic learning and conversely the types of learning processes that augment identity development.

For the purposes of establishing a learning related correlation the concept of "active learning" was introduced to the study in order to provide a conceptual framework for defining and measuring learning. Ausubel, Novak and Hanesian (1978, p. 123) are helpful in elaborating the cognitive aspects of active learning. Learning is active when the following processes occur: (1) the learner is making judgments regarding the relatability and relevance of new material, (2) the learner is attempting to reconcile new concepts with existing concepts and contrary knowledge and (3) the learner is consciously reformulating concepts into a meaning structure that the learner knows is compatible with his or her experience, language patterns and modes of self expression. Active learning cannot occur when concepts are diffuse and unclear; thought processes are severely impaired when concepts in a learner's memory are vague and confused. In the active learning process the students learn to select what they want to learn and critically monitor their understanding, not being satisfied until they can reflect and self express the materials in a manner consistent with existing meanings, language and styles of expression. In summary, according to cognitive based theory an active self critical ability with concepts is central to the process of concept retention and application because it is through such a process that concepts become: (1) stable, (2) associated with other concepts, and (3) transferable to other discipline areas (Houston, 1981). One of the principle ways to determine if active learning has occurred is to study student questions or statements and then evaluate the degree to which course content has been reconstructed, integrated and expressed.

The Hypothesis

There is a positive correlation between the active thinking reflected in student questions and ego identity status.

Method

Measuring Ego Identity

In recent years research on ego identity has been dominated by Marcia's concept of "identity status." These statuses describe four modes of thinking by youth to complex psychic and interpersonal demands.

If a subject has obtained his/her commitments by the uncritical assimilation of parental values with little indication of experimentation, risk or crisis, he/she is assigned the status of foreclosure. Foreclosures have accepted whatever identity their parents or parent surrogates had planned for them. If on the other hand the subject has forged his/her commitments (e.g., to others) after a period or periods of crisis then he/she is assigned the status of achievement. Achievements express a strong degree of commitment to occupational and ideological choices, after a fairly extensive period of searching among alternatives. A third status, moratorium, means that the subject is currently in a state of crisis, and willing to test alternatives in spite of confusion and social pressure. At their best moratoriums are active, engaging and creative; at their worst, paralyzed by indecisiveness. Finally, there is the identity diffusion status in which the individual is avoiding both crisis and commitment. Diffusions shun demanding situations and seem aimless, aloof, drifting and empty. In the hierarchical and developmental sense moratorium and achievement are considered higher forms of identity development.

The identity interview is basically a process in which the student describes his or her processes in making choices in the areas of career, ideology, religion, and sexual roles and attitudes. The criteria which define the statuses become the basis for assigning a student to a single status.

Measuring Active Learning

The key to measuring "active learning" is evaluating the extent to which students can reconstruct (with their questions or statements) course content in a manner consistent with their own meanings and language, making integrations and personal applications. In order to have a consistent means of measuring active learning I developed an instrument termed "cognitive activity and integrations" or CA&I. The CA&I considers four criteria as indicators of cognitive activity reflected in a student's question. The criteria are: (1) degree of struggle with the material, (2) degree of content mastery, (3) degree of concept integration and original inference and (4) degree of personal integration (self application) and evaluation. From these criteria five hierarchical ordered categories were developed which are briefly termed: C-1 indifference & detachment; C-2 verbatim comprehension; C-3 self critical and active confusion; C-4 concept mastery and working for active integrations; C-5 concept consolidation and personal integrations.

Process

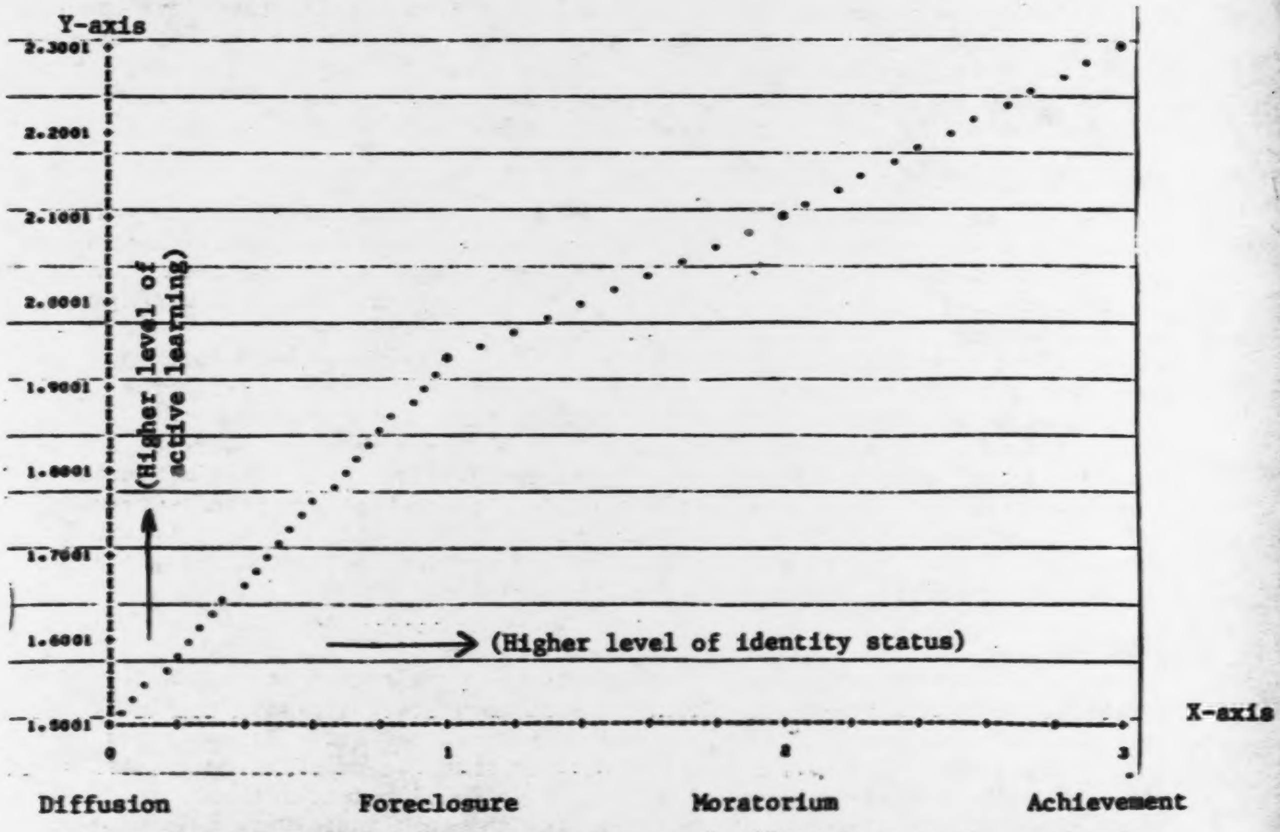
In a pilot research project 35 students in an undergraduate educational psychology course were requested eight times to write questions "pertinent to the course's content, but, if appropriate, related to personal issues and interpretations." The students were informed that the questions were part of the instructor's preparations and were used to develop lectures and organize discussions. (The students did in fact find this procedure very helpful.) After collection the questions were rated by four judges using the CA&I as an instrument of analysis. Thus each student received a total of 32 ratings. Ratings were done blind to previous ratings and the ratings of other judges. Because this was a pilot study the criteria for analysis were modified and the entire rating process was done three times in order to achieve acceptable interjudge reliability.

In the second stage of the project 21 students were randomly selected and interviewed in a 1-hour session by the author using Marcia's identity status interview. Each student was asisgned one of the following statuses: (1) foreclosure, (2) moratorium, (3) diffusion, and (4) achievement.

Results

Two separate computer analyses were done on the data. Both focused on the correlation between the conceptual level of the students' questions and the identity interview status.

The following graph was created (from the first analysis) by combining the mean of all students' conceptual levels by all judges of all entries on the Y-axis. The X-axis indicates the identity status, with the higher statuses toward the right end of the axis. The separate dots indictae combined relationships of more than one student. The graph does support the hypothesis, but gives a visual impression that the correlation is stronger than the statistics suggest.



A second graph (omitted for reasons of space) illustrates on the same axis the correlation of the conceptual rating of the student and the identity status. The other axis identifies individual students by number. An analysis of this graph illustrates that a majority of the students tend to confirm the hypothesis, with four students who didn't. Three of the non-confirming students were foreclosures who scored high on the conceptual ratings. All of the identity achievers and moratoriums, with one exception, tended to confirm the hypothesis. This graph is important because it indicates the need for a larger sample population to counter the effects of a few student ratings that dramatically change the correlations.

With the second computer analysis a Kendall's Tau correlation was done by individual judges correlating the conceptual level of the student questions with identity status. The results were:

Judge #1	.13548	significance	.2666
Judge #2	.30151	"	.0883
Judge #3	.29069	"	.1211
Judge #4	.13537	"	.2878
all judges	.17279	"	.0599

The above analysis indicates that all correlations on all scales are moving in the same positive direction--conceptual levels of the students correlate modestly with the status interviews. Although the correlations are not substantly significant they do suggest a confirmation of the hypothesis at some conceptual level. The analysis also suggests that there is a fair degree of variation between judges which is probably because of a lack of training with a new instrument.

An analysis by Spearman correlations indicated that a few of the variable pairs were negative (e.g., -0.0752 sig. .277) but that many were high (e.g., .5017 sig. .001). Thus, in many paired relationships the hypothesis appeared valid.

Discussion

After our experience with this study I would recommend the following:

(1) More careful training of judges. The problem of interjudge consistency was amplified by the fact that three of the judges had no prior research experience and the author was field testing the CA&I instrument. It was difficult to train while the wheel was being invented. Now with the CA&I more or less developed more careful training is possible.

(2) Continued refinement of the CA&I instrument. All the judges did have some difficulty determining the correct category for some questions with the CA&I. In order to correct this problem the team of judges refined the instrument 3 times and each time re-analyzed the entire assemblage of student questions. This practice was analogous to doing forest planning while the chain saw runs—revisions don't work well in the middle of a process. We concluded that the CA&I is based on valid concepts and with further refinements will become an increasingly cogent method of measuring student conceptual activity in questions. We think it is very important to develop an instrument that reflects the concept of active learning developed by Ausubel, Novak & Hanesian.

(3) A larger sample size for reasons cited above.

(4) Application of the hypothesis and research process to a variety of teaching conditions and approaches. The author was the instructor of the course from which the students' questions came. Active learning, independent thinking and student autonomy were encouraged and rewarded. The author's teaching behaviors probably encouraged all students to write more complex questions. However, the lower identity status students, for reasons of conformity, may have been the most

> effected while the higher identity status and more autonomous students were the least effected by teacher expectations. It would be interesting to explore the questioning patterns of these same students by changing teacher expectations and reward variables.

The significance of this study is that it: (1) reinforces the importance of introducing the identity construct to the field of education, and (2) moderately confirms the hypothesis that personality characteristics mediate thinking processes. The work is pilot in the sense that the hypothesis must be,in the future,further investigated. I do think, however, we have established at least a valid conceptual relationship and this may be important to the identity and learning literature.

Future work could examine the hypothesis in a number of interesting ways. For example, thinking patterns in student questioning could be correlated with identity status across different content areas and teaching approaches. The idea would be to investigate conditions under which the correlation would best hold. Another interesting and complex problem would be to determine the characteristics of an educational environment which are most conducive to the type of thinking that is most often associated with high identity statuses. Research of this nature would be helpful to those educators who want to link educational practices with the aims of identity development. Finally, work could be done investigating teacher identity statuses and correlating their statuses with learning outcomes and learning patterns.

In summary, a moderate correlation has been established between cognitive functioning and personality. This correlation needs further study, but also opens a number of interesting research possibilities which will lead to a better understanding of the overall development of the person in the academic setting.

Selected References

Ausubel, D., Novak, J., & Hanesian, H. Educational Psychology: A Cognitive View. New York, NY: Holt, 1978.

Bourne, E. "The State of Research on Ego Identity: A Review and Appraisal. Parts I & II." Journal of Youth and Adolescence, Vol. 7, Nos. 3 & 4, 1978.

Chickering, A. Education and Identity. San Francisco: Jossey Bass, 1969.

Diggory, S. Cognitive Processes in Education: A Psychological Preparation for Teaching and Curriculum Development. New York, NY: Harper, 1972.

Erikson, E. Identity: Youth and Crises. New York, NY: Norton, 1963.

Erikson, E. "Identity and the Life Cycle." Psychological Issues, 1959, 1 (Monograph No. 1).

Houston, J. Fundamentals of Learning and Memory 2E. New York: Academic Press, 1981.

Marcia, J. "Development and Validation of Ego-Identity Status." Journal of Personality and Social Psychology, Vol. 3, No. 5, 551-558.

Marcia, J. "Identity in Adolescence." In Addison, J. (Ed.), Handbook of Adolescent Psychology. New York, NY: John Wiley & Sons, 1980.

NEEDS ASSESSMENT IN ADULT EDUCATION: A CRITICAL ANALYSIS OF THE LITERATURE THROUGH 1981

by
Thomas J. Sork
University of British Columbia

Introduction

The concept of need and the process of needs assessment have assumed a rather venerated position in the literature of program planning. An analysis of this literature completed by Buskey and Sork (1982) revealed that only one planning model of the ninety reviewed failed to address needs assessment as a component of program planning. If the literature reflects current practice, then a good deal of effort is expended by adult educators on the process of assessing needs. Even if the literature only reflects perceptions of how planning should be done, the centrality of the process in so many planning models suggests that it is considered an essential ingredient in the recipe for effective educational programs. Since need and needs assessment are so central to theory and practice in adult education it would seem useful to periodically analyze the literature to determine what is being written, how it relates to previous work, and whether it has theoretical or practical utility.

The intent of this study was to both classify and evaluate literature on need and needs assessment so that students, researchers, and practitioners could access documents which are relevant to their work. This study is unlike other analyses of this literature in that an explicit analytical framework was used as a basis for comparing and contrasting the publications. The results of the analysis are presented in chart form and bear a strong resemblance to the product comparison summaries found in such publications as Consumer Reports. This approach to analysis has two advantages over the more common narrative review. First, it makes explicit the dimensions of analysis considered useful in comparing and contrasting various pieces of literature. This practice promotes careful consideration of which characteristics of the literature should be used to make judgments of theoretical or practical utility. Second, it reveals which publications were included in the analysis thereby informing the reader of the specific literature used as a basis for subsequent generalizations about the "state of the art."

The immodest objective of this study was to identify and analyze all literature with relevance to adult education that has a primary or sole focus on the concept of need and/or the process of needs assessment. Although it is quite unlikely that this objective was achieved, it nevertheless guided the search for and selection of literature. Most of the literature included in the study was published prior to 1982.

There are three limitations to this study which should be noted. The first is that the literature selected for analysis deals only or primarily with need and needs assessment. Not included were publications which addressed the entire planning process since these were included in an earlier study (Buskey and Sork, 1982). The second limitation is that the judgments reported in the analytical summary were made by only one person. Ideally, members of a jury would have

---

*Copies of the complete analysis and a bibliography of publications included in the analysis are available from the author: Thomas J. Sork, Assistant Professor, Department of Administrative, Adult and Higher Education, University of British Columbia, 5760 Toronto Road, Vancouver, BC, CANADA, V6T 1L2.

read, classified, and evaluated each piece of literature. But the probability of finding more than one person with such masochistic tendencies was judged to be quite low. The third limitation is a result of the rather diverse nature of this literature. Some might view this analysis as an attempt to compare apples and oranges, and they would be correct. Although the analytical framework was applied to all the publications, it is clear that many of the authors never intended to address some of the dimensions of the framework. It should therefore be recognized that even though a publication may have received a relatively "low" mark on evaluative dimensions, the objective of the author may have been totally achieved.

A Summary of Previous Analyses

This study, although somewhat unique in its approach, is only one of several analyses of needs assessment literature conducted in the past twenty-five years. Those considered of particular relevance to adult education are included in the analytical summary but will be mentioned here because of their special contribution to understanding this component of program planning. The publications identified below are not all strictly broad reviews of the literature, but all use published literature as the "data" from which generalizations and conclusions are drawn.

One of the first thorough explorations of the concept of need, published by Archambault in 1957, emphasized the central role that values play in determining needs. Komisar, in 1961, suggested that uses of the term "need" could be categorized as either prescriptive or motivational, but concluded that, because of its ambiguity, the term seemed more useful in slogans than as a guide to educational practice. Witkin (1975, 1977) has concentrated on the technical aspects of needs assessment and has reviewed many assessment models used in public education. Monette (1977, 1979) has looked at both how "need" is used and the assumptions which seem to underlie needs assessment activities. Griffith (1978) concluded after reviewing the literature that adult educators fail to acknowledge the inherently political nature of needs assessment. Pennington (1980) derived from the literature a set of suggestions for guiding needs assessment activities. Benseman (1980) provided a thoughtful critique of the literature and proposed a model representing a "needs approach" to program planning.

The Analytical Framework

An inductive analysis of samples from this literature suggested that eight dimensions were useful in describing and differentiating works on need and needs assessment. Five of the dimensions were categorized as descriptive, and provide a basis for selecting literature with characteristics relevant to the setting and tasks of interest to the reader. Three of the dimensions were categorized as evaluative, and can be used to differentiate publications based on qualitative factors which limit or enhance their utility for specific users. In the following sections these dimensions will be described and a rationale provided for their inclusion in the analysis.

1. Descriptive Dimensions

a. Planning context. This dimension refers to the environment, situation, or organizational structure to which the literature seemed most relevant. Planning context was judged to be an important descriptive dimension because variations in context can affect the utility of concepts and processes. Users of the analysis may wish to first concentrate on literature most relevant to their context, then progress to literature in other contexts.

b. Emphasis. The emphasis of the publication refers to the primary contribution it makes to an understanding of needs assessment. Some authors focus on clarifying concepts associated with needs assessment; some focus on describing procedures for conducting a needs assessment; some give equal attention to both. Emphasis was judged to be an important descriptive dimension because someone wishing to do a needs assessment may wish to select literature with a focus on procedures while someone interested in need as a concept would focus on literature with that emphasis. The emphasis of a publication is not always clear from its title.

c. Level of need addressed. Knowles (1980) makes useful distinctions between individual, organizational, and community needs. How one goes about conducting a needs assessment varies with the level of need addressed. There are important distinctions to be made between the needs of individuals in organizations and communities and organizational or community needs. Some authors address more than one level, but most focus on only one.

d. Type of needs emphasized. Komisar (1961) and Beatty (1981) have described needs as being of two types: motivational and prescriptive. Motivational needs are identified by the "owner" whereas prescriptive needs are identified by someone other than the "owner." This distinction is considered an important descriptive dimension because the needs assessment process varies depending upon which type of need is being assessed. Although authors do not often make such distinctions explicit, a reading of the publication generally reveals whether the emphasis is on motivational, prescriptive, or both types of needs.

e. Data collection procedures discussed. Various data collection procedures are often mistakenly referred to as needs assessment methods or techniques. Such labelling obscures the complexity of needs assessment and overemphasizes information gathering tasks. Nevertheless, many publications contain descriptions of useful data gathering procedures and these are identified in the analytical summary. Including such information in the analysis was judged useful because data collection is one of the necessary tasks in needs assessment, and users of the analysis might like to read about specific procedures for doing so.

2. Evaluative Dimensions

a. Theoretical framework. Some authors of needs assessment literature include explicit theoretical frameworks which attempt to explain why needs should be viewed in a particular way or why assessments should be carried out in a particular manner. Others simply describe a perspective or technique without providing any explanation of why it should be accepted. This dimension was considered important because some users may desire only a how-to-do-it, cookbook-like approach, while others may be more interested in the concepts, assumptions, and principles underlying a particular approach to needs assessment. Including this dimension allows users to select literature which contains an appropriate amount of theoretical explanation.

The following scale was used to represent the degree to which a piece of literature contains an explicit theoretical framework: not present or not addressed means the writer made no attempt to explain why a perspective or technique should be adopted. A rating of low means the writer made some effort to explain why a perspective or technique should be adopted, but the evidence/argument was rather weak. A medium rating means the writer made a clear effort to provide such explanation, and the evidence/argument seemed reasonable although not extensive. A high rating means the evidence/argument provided by the author was extensive.

b. Treatment of values. The central role of values in both defining and assessing needs has been emphasized repeatedly in the literature (Archambault, 1957; Atwood and Ellis, 1971; Benseman, 1980; Dearden, 1972; Komisar, 1961; Monette, 1979). This evaluative dimension provides an assessment of the degree to which the author addressed the role of values. It could be argued that this dimension is simply a component of the theoretical framework. There seems to be a clear relationship between the two, but it was judged important to separate them for purposes of this analysis. Without giving considerable attention to values, authors risk presenting needs assessment as a value-free technology, which it clearly is not.

The following scale was used to represent the degree to which the author addressed the issue of values: not present or not addressed means that the author made no attempt to indicate the role of values in need and needs assessment. A rating of low means the writer made some effort to discuss the role of values but the discussion was superficial. A medium rating means the writer provided a discussion of values which was useful but not especially detailed. A high rating means the writer provided extensive discussion.

c. Comprehensiveness of needs assessment tasks. In order to carry out a needs assessment, several tasks must be accomplished. For this analysis, five such tasks were identified and a judgment made of how much guidance was provided by the author to help the reader complete each task. The tasks were:

1. Deciding what information to collect.
2. Deciding where to find information.
3. Deciding how to gather information.
4. Deciding how to process information
5. Deciding how to determine priorities.

The following scale was used to represent the degree to which the author provided guidance on how to complete the tasks: not present or not addressed means the writer provided no guidance. A low rating means the writer provided some guidance but it was not judged sufficient to assure successful completion of the task. A medium rating means the writer provided sufficient detail to complete the task in a single prescribed fashion, but did not offer alternative means to complete the task. A high rating means the writer provided sufficient detail so that the task could be completed by using two or more alternative approaches.

Process Used to Complete Analysis

After completing a broad-based literature search, which included the ERIC system, each document was reviewed to determine if it met the criteria for inclusion in the analysis. An initial judgment of planning context was made for each document. The publications were grouped by planning context and each document was then read in detail. After reading each document judgments were made and recorded on analytical summary sheets (Figure 1).

Information contained on the analytical summary sheets represents only one product of this study. Some of the insights gained by systematically analyzing this rather broad literature will be discussed at the paper session and can be obtained by writing to the author.

References

Archambault, R.D. The concept of need and its relation to certain aspects of educational theory. Harvard Educational Review, 1957, 27, 38-62.

Atwood, H.M. and Ellis, J. The concept of need: An analysis for adult education. Adult Leadership, 1971, 19, 210-212; 244.

Beatty, P.T. The concept of need: Proposal for a working definition. Journal of the Community Development Society, 1981, 12, 39-46.

Benseman, J. The assessment and meeting of needs in continuing education (Reports on Education and Psychology, Nr. 1). Stockholm: Department of Educational Research, Stockholm Institute of Education, 1980. (Also as ERIC ED 193 466).

Buskey, J.H. and Sork, T.J. From chaos to order in program planning: A system for selecting models and ordering research. Proceedings of the Twenty-third Annual Adult Education Research Conference. Lincoln: Department of Adult and Continuing Education, University of Nebraska--Lincoln, 1982.

Dearden, R.F. 'Needs' in education. In R.F. Dearden, P.H. Hirst and R.S. Peters, Education and the development of reason. London: Routledge and Kegan Paul, 1972.

Griffith, W.S. Educational needs: Definition, assessment, and utilization. School Review, 1978, 86, 382-394.

Knowles, M.S. The modern practice of adult education: From pedagogy to andragogy (Revised Ed.). Chicago: Association Press/Follett, 1980.

Komisar, B.P. "Need" and the needs-curriculum. In B.O. Smith and R.H. Ennis (Eds.), Language and concepts in education. Chicago: McNally, 1961.

Monette, M.L. The concept of educational need: An analysis of selected literature. Adult Education, 1977, 27, 116-127.

Monette, M.L. Needs assessment: A critique of philosophical assumptions. Adult Education, 1979, 29, 83-95.

Pennington, F.C. Needs assessment: Concepts, models, and characteristics. In F.C. Pennington (Ed.), Assessing educational needs of adults (New Directions for Continuing Education, Sourcebook No. 7). San Francisco: Jossey-Bass, 1980.

Witkin, B.R. An analysis of needs assessment techniques at state, intermediate, and district levels. Washington, DC: National Institute of Education, Department of Health, Education and Welfare, 1975. (Also as ERIC ED 108-370).

Witkin, B.R. Needs assessments kits, models, and tools. Educational Technology, 1977, 17(11), 5-18.

PUBLICATION (Listed alphabetically by author within PLANNING CONTEXT category)	DESCRIPTIVE DIMENSIONS									EVALUATIVE DIMENSIONS						
	PLANNING CONTEXT	EMPHASIS		LEVEL OF NEED ASSESSED			TYPE OF NEEDS EMPHASIZED		DATA COLLECTION PROCEDURES DISCUSSED	[illegible]	TREATMENT OF VALUES	COMPREHENSIVENESS OF NEEDS ASSESSMENT TASKS				
		Clarify concepts	Describe procedures	Individual	Organizational	Community	Prescriptive	Motivational				What info. to gather. 1	Where to find info. 2	How to gather info. 3	How to process info. 4	How to determine priorities. 5

Figure 1. Analytical Summary Chart for needs assessment literature.

A Phenomenology[1] of the Will-to-Learn: An Investigation Toward Research into Essential Structures in Adult Education

Sherman M. Stanage

Introduction

Most of our learning in early years takes place without much effort. Surely the ways in which we acquire a generalized but very basic stock of knowledge -- itself the footings and foundation to subsequent skills and to our understanding of worlds -- are articulated through personal activities not requiring great effort. William James claimed "we are misled into supposing that effort is more frequent than it is by the fact that during deliberation we often have a feeling of how great an effort it would take to make a decision now" (PP, II, 534).

Sometimes effort takes place in personal actions through which learning occurs. These effortive[2] episodes may be actions of choosing, deciding, or resolving something. A person is doing something all the while, and when these actions are performed it seems clear enough that the willing aspect of a person's life both energizes and dominates feeling, experiencing, and consciousing[3] aspects of that person's life. It seems clear also, that the will-to-learn is an essential structure in the process through which persons move in learning anything at all.

Whereas it is surely the case that a person's willingness to learn -- the episodic expression of one's essentially structured will-to-learn -- must have been functioning already in nascent, latent, and rudimentary ways prior to any obviously effortive learning to be able to take place, I do not intend to treat this question here.[4] The problem of the essential structure of the will-to-learn arises precisely at the juncture where effort becomes clearly evident in learning. All of these matters deserve careful investigation along phenomenological lines.

I propose to do a phenomenology of the essential structure of the will-to-learn. This inquiry consists primarily in adducing appropriate phenomena constituting evidence for the presence of this structure in all effortive adult learning. If this structure is present in all effortive adult learning then there are inescapable implications for teaching as well.

The literature principally relevant to this investigation is the lifelong work of William James, his *The Principles of Psychology*, and especially the principal essay in his first book in philosophy, *The Will to Believe*, which bears the same title. In recent years James has been rediscovered as a philosopher, but this time as a philosopher of much greater originality, rigor, and magnitude than previously thought. His momentous influence on Edmund Husserl, the founder of modern phenomenology, may be cited as an example of his prototypical importance to phenomenology.

Three other sources of importance to this discussion deserve mention. These include the works of Alexander Pfänder, Nicholai Hartmann, and Alfred Schutz.[5] Together they constitute a corpus of phenomenological investigation of the greatest value for the discipline of adult education.

Department of Philosophy
Northern Illinois University
DeKalb, Illinois 60115
USA

In this paper, (1) after adducing some of the evidence attesting the presence of the essential structure of the will-to-learn in effortive learning, I (2) show how feeling, experiencing, and consciousing are related to will and the will-to-learn. The will is dominant in these processes of our lived bodies in originative and generative streams within effortive learning processes. The dominance of will in effortive learning is decisive in the adult years. Parenthetically, adult learning might even be defined as effortive learning in the face of countless known resistances within the everydayness of the adult life-world. (3) I discuss some of the implications of this investigation of the will-to-learn for research in adult learning and teaching. Finally (4) I conclude with certain recommendations for undertaking research projects toward the goal of assessing the claims central to this paper.

Evidence of the Phenomenon of the Will-to-Learn

Every one of us knows adults who are willing to learn. No doubt each of us is such a person. One of my claims is that there is an essential structure of the will-to-learn in the life of each and every person who is willing to learn. Consider the following evidence for this claim.

The focus of my thoughts -- the object most in my mind -- as I prepare this paper is the will-to-learn and the problems of its structuring within my thoughts. I search carefully through my feelings, through my own experiencings, and within my understanding, and I find (not surprisingly) that first of all _I am a lived body_ engaging in this searching. My body is particular, individual, and unique. My world is my lived world, my experienced world, with my individualized body as its center of senses, interest, and action.

Moreover, as a lived body I am conscious. Or better: as a lived body, _I conscious_. All primary functions of the body are the grounds -- but not the causes -- of my consciousing. It is not so much a question that I find the will-to-learn _in_ my consciousness as it is that I feel, I experience, I know _that_ I am willing to learn. If I feel, experience, and conscious my will-to-learn there must be a will-to-learn, itself the intended object of these flowing feelings and the rest. This reflexivity, this reflexive turn, through which I discover the phenomenon of my willingness to learn is itself evidence for a structuring of the will-to-learn.

My lived body, my consciousing -- all here and now -- move through temporal spans. They take time. _They express interest through time_. This individual self which I am is my center of interest. My interest is fundamentally my feeling accompanying any instance of my attending-to something, whether object, person, idea, cluster of ideas, or state of affairs. Interest is feeling's grasp of something.

The object of my interest, of my attending-to something, is _what-is-attended-to_. This _attending-to_ is the lowest degree of identifiable effort. What interests me is something toward which I am directed, toward which I am pulled. My attending-to is itself my being pulled toward something. Therefore, whereas I as lived body, and as consciousing, am "here" and "now," _what-is-attended-to_ is "there" and "then." I am not pushed causally toward it, but pulled toward and by it. The object of my interest has the character of something which ought to be realized in the future. It is an ought-to-be in my life.

I feel, experience, and conscious _effort expended_ in this pulling. It is a power, an energy, a force, exertion, efficacy touching me and grasping me. The pulling effect is experienced as an effort, and experienced in degrees, say, as a weak or strong effort. The effort is experienced within my lived body, as conscioused, within my interest, and is experienced only in relation to my attending-to something.

We are stepping within the threshold of will. I do not speak now of will as a metaphysical entity or problem, e.g., as will in the jaded "problem of free will" (as opposed to determinism and indeterminism). I do not ask causal questions about it. I do not inquire whether it exists or not. I conscious will. Surely I conscious my will. Intersubjectively, and as public information, I only attempt to guide each of us by means of coming to a clearer awareness of what I see and by trying to describe it to you. This is not so much a resolution of a problem in reason and objectivity, as it is a careful focusing upon phenomena each and every one of us experiences.

We may further say that my will is a fulfilled state of affairs of the future retrospectively seeking out those effortive pathways to itself. My will is a volitional inner-directedness toward something, toward a future state of affairs. But this future state of affairs now is only a present idea. It is one of many ideas in my consciousness, in my mind. Hence James could say that the "will is a relation between the mind and its ideas" (PP, II, 559). But what kind of relation is it?

My will is my attending-to one or more of my ideas respecting a future state of affairs. It is my attending-to in an effortive manner. I am pulled toward ideas about one state of affairs, say, with lesser or greater force. This force is felt, experienced, and conscioused.

> "We stand here exactly where we did in the case of belief. When an idea stings us in a certain way, makes as it were a certain electric connection with our Self, we believe that it is a reality. When it stings us in another way, makes another connection with our Self, we say let it be a reality. To the word 'is' and to the words 'let it be' there correspond peculiar attitudes of consciousness which it is vain to seek to explain. The indicative and the imperative moods are as much ultimate categories of thinking as they are of grammar. The 'quality of reality' which these moods attach to things is not like other qualities. It is a relation to our life. It means our adoption of the things, our caring for them, our standing by them. This at least is what it practically means for us; what it may mean beyond that we do not know. And the transition from merely considering an object as possible, to deciding or willing it to be real; the change from the fluctuating to the stable personal attitude concerning it; from the 'don't care' state of mind to that in which 'we mean business,' is one of the most familiar things in life. We can partly enumerate its conditions; and we can partly trace its consequences, especially the momentous one that when the mental object is a movement of our own body, it realises itself outwardly when the mental change in question has occurred. . ." (PP, II, 568-569).

The Oxford English Dictionary observes that the most remarkable feature of "will" when used as a verb, besides its many idiomatic and phrasal uses, centers in its use as a regular auxiliary of the future tense. It is this sense which Alfred Schutz underscores when he observed that "in order to project my future action as it will roll on I have to place myself in my phantasy at a future time when this action will already have been accomplished, when the resulting act will already have been materialized" (CP, I, 68-69). This significant use in our language itself suggests the manner in which will and willing dominate feelings, experiencings, and consciousings within the everydayness of the lived world of the adult. Our willing holds sway over, has the ascendancy over, and is most influential in the layers of personhood within the everydayness of the adult's planning of projects. These efforts of planning are themselves crucial features of adult learning in the adult worlds.

Feeling, Experiencing, Consciousing, Will, and the Will-to-Learn

My lived body at work. Consciousing. My interest expressed through identifiable temporal spans. Specific objects attended-to through interest expressed. My effort expended, felt, experienced, conscioused, as pulled toward some future state of affairs among others. Feelings of my lived body pushing myself toward a future state of affairs within which my lived body will be located, but a future state as conceived now. These phenomena are clearly among the available evidence attesting the presence of will and willing in a person.

Yes, the will is a relation between the mind and its ideas. My will is the relation between my mind and my ideas. But the will is a special kind of relation, a relation not arrived at through introspection but through retrospection.

Retrospectively, we may study the positioning of the structure of the will-to-learn in a person's life through the degrees of commissive language which (s)he uses in describing what in effect is an absence of a willingness to learn or what in fact is a willingness to learn through one or more learning projects. Commissive language is the language of commitment. In committing ourselves we consent, we intend, and we act. We may be said to commit ourselves to something when we consent to something through: agreeing, adopting, espousing, declaring for, championing, supporting, maintaining, standing up for, siding with, embracing, and favoring something.

We commit ourselves when we intend something through: promising, being determined, meaning, proposing, vowing, swearing, planning, to do something. We commit ourselves when we act through: undertaking, dedicating ourselves to doing, covenanting to do, binding ourselves to, engaging, pledging ourselves to, contracting for, and betting on something.

Willing is a conscious process which begins with deliberate choice and with resolution of questions and conflicts, continues through decisions and resolution, and ends with the realization of what is willed, the execution of the willed state of affairs. This execution of the willed state of affairs is the choice of the concrete means and the successive realization of the specific means (PWM, 7).

Consider now the structure of the will and willing. First we may say that to structure is to build. To structure anything is to build or form it into an organization of parts and elements into a whole of these parts and elements. The structure is the coexistence in a whole of distinct parts having a definite manner of arrangement. The structure is what is built or constructed.

The structure of the will is the lived body at work through consciousing activities which include the following elements: These consciousing activities are specific interests moving through temporal spans, interests attending-to certain ideas selected from among others which could be attended-to and might be at another time. A specific state of affairs of the future has been possibilized in the present. The possibilization itself is also an expenditure of effort felt, experienced, and conscioused as a pulling toward that possibilized state of affairs.

The essential structure of the will-to-learn is in place -- is positioned in one's consciousness -- as an essential structure logical antecedent to any episode of one's actual willingness to learn. A person then is said to be disposed to learn. Relevant elements have been positioned in appropriate order in one's feelings, experiencings, and consciousings. That person may be said to be disposed toward learning something through relevant distribution and arrangement of these feelings, experiencings, and consciousings toward greater effectiveness, economy, ease or conformity to a pattern of orderly but active steps in capturing an idea. The placement of the essential structure of the will-to-learn is an instance of a singular episode of the willingness to learn evidences one's dispositional character toward learning through an open-mindedness toward the possibilized yet-to-be-learned, a whole-hearted interest toward, and responsibility for, the particular state of affairs to be actualized through a given learning project.

The Will-to-Learn in Research in Adult Learning and Teaching

This investigation suggests certain implications for research programs in adult learning and teaching. Learning in adult stages is more in the nature of effortive learning than learning is at earlier stages. This is true since it is more likely the case that the everydayness of the adult's lifeworld manifests the greatest array of resistances, obstacles and problems and that the adult's execution of projects and realization of goals can only be successful if these are recognized and overcome. Being willing to learn, therefore, means both acquiring the efficacy and mobilizing the power necessary to executize one's place in molding something within the real world which one believes ought to be a real state of affairs. One's willing determines and creates values in the world. Willing is bringing into concreteness an idea or ideas.

The structure of the will-to-learn is a structuring of values within our consciousings. Some of these consciousings may be promises, hopings, believings, and knowings, for example, but each and every one is a personal action. And each is activated through willing, itself in turn the attestation of the logically prior essential structure of the will-to-learn. In promising, in hoping, in believing, and in knowing, I learn something more about myself at the same time that I gear myself executively into the outer world. My actions moving from the core, from the centrality, of my lived body and my consciousness are my willings, and these are the carriers of values. Hence the structure of the will-to-learn is a structure of values.

It follows that all research into the essential structure of the will-to-learn and research into individual persons' willingness to learn is always value-laden research. And how could it be otherwise for this kind of research within the context of adult learning and adult education? Recall that I provisionally defined adult learning as effortive learning in the face of countless known resistances within the everydayness of the adult lifeworld. This means among other things that the adult first of all does not so much know something as (s)he is something, that is, a lived body, a consciousing being. The adult learner first of all does something. And will is what the adult does first of all in this instance. (S)he wills: "Let it be so!" There is no time when all the necessary data are in for one to start a project. There could always be additional necessary information. There is not one of these, or even a collection of these data, which could be determined to be -- according to any theory of learning -- the necessarily causative origins of the adult's episode of willingness to learn. And the "let it be so!" which is the will-to-learn in the adult is always singularly personal:

> "(For a person) there is the tendency always to have something personal in (one's) volition and action, such that no one else can will it, or even imitate it -- the tendency in every deed, together with all the general claims, to be something 'more' than one of many, to have a value of one's own in life, and thereby to prove one's individual moral

> right to existence. Of course this tendency can never assume the form of a deliberate principle deliberately determining the will" (H, II, 357).

Central problems for relevant research programs include: descriptions of individual persons' lived bodies through autobiographical accounts; descriptions of individual persons' consciousings regarding deliberation and choice of their projects in the lived world; descriptions of persons' attending-to some ideas rather than to others; descriptions of what individual persons conceive to be a possibilized ought-to-be in their lives within their lived worlds; descriptions of what it is in individual persons' lives which gives direction to their conduct insofar as it lies in the power of persons to decide for or against a felt value as an expression of the will-to-learn. The shopping list of possible research projects and much more portentous research programs is almost endless. Carrying through any one of them would be most significant research for adult education.

Two Recommendations Concerning Research Projects Founded in the Claims Central to this Paper

My first recommendation is that investigators in adult education should recognize that willing is neither reducible to nor causally related to wishing, wanting, desiring, choosing, or striving. There may be orderly and traceable relationships between all of these, but causal order is not the only kind of order and ordering process available for use in systematic study of carefully circumscribed subject matters. Nor is reductionism the only legitimate economizing way of reflecting. There are other kinds of order for use in such studies, and especially so for use in studies beyond such physical sciences as physics. Examples of these other kinds of order include varied non-causal approaches in ethics (especially in ethics), logic, epistemology, and metaphysics. But whatever these non-causal approaches are can only be brought forth for use in our studies through rigorous phenomenological descriptions of the central features of our selected subject matters.

Causal order and the economizing of investigations facilitated through the methodological presupposition of causal order in areas of study beyond the physical sciences go directly counter to the work of adult education. Not only does its use go counter to this work, its invocation as a principle of method directly contradicts both adult learning and adult learning. Dewey said many years ago that although motives may induce they do not necessitate. Each person surely has motives for this or that action, but these motives are not the causes investigators almost always conclude too quickly that they are. These motives will always be one or another of two distinct kinds. Alfred Schutz called them "in-order-to" motives and "because" motives:

> "Motivational relevances . . . are of two kinds. On the one hand are the in-order-to type, which are arranged (if not integrated) with one another into what is commonly called a 'plan': plan for thought and for action, for work and for leisure, or the present hour or for the week, and so on. Each of these, in turn, (is) interrelated (but not necessarily integrated) into a general, paramount plan: the plan for a life. These in-order-to motivations, however, are founded on a set of genuine because motives sedimented in the biographically determined situation of the self at a particular moment. Psychologists have various names for this set of because motives: attitudes, personality traits, and given character" (RPR, 55-56).

Neither of these two types of ordering is causal. Investigating these distinct kinds of motives involves investigations into all of the sorts of ideas and actions which are brought forward through persons' feelings, experiencings, and consciousings as expressed through their willing something and through their being willing to bring these into being in their lived worlds. Motives may induce but they do not necessitate. Our motives are our willingnesses, and these in turn derive from our structures of will. Hence, any motivation to learn is founded in the essential structure of the will-to-learn. Investigations of this essential structure of the will-to-learn always involve an intersubjective and cooperative method of research. Use of a common language makes it so. It is intersubjective in another sense in that although one adult may or may not have a willingness to learn in a particular instance or situation, there is somewhere in that person's consciousings an essential structure of the will-to-learn, and another adult may be in a position to help educe or bring to birth an explicit expression of this essential structure. The hope should be that each adult should learn to do it alone if possible.

Here is my second recommendation. Persons are involved in the research carried out within adult education. These persons taken as "subjects" are respondents, let us say, and as respondents they should always be allowed to respond, and not in forced or necessitated ways dictated by prior research methods and methodologies. The subjects of investigation should not be finitized and coerced by the methods and operations. In investigations of persons the methods used must always emerge from the phenomena under investigation. In the special case of investigation of persons these phenomena always include phenomena relating to what and whom persons have been and to what and whom the same persons will to be. Therefore it is not so much the case that there are various schools or philosophies of adult education which provide the presuppositions and methods whereby persons are enabled to do these things along diverse ways and in accord with various — and even competing — models.

The question is how an adult comes to see that it may be possible to find a dramatically different place in the lived world through learning. In investigating the ways in which it may be possible for them to do so, every one of our research projects in adult education should be reflexive. It should move along in two directions at the same time. Every research project should pursue two distinct kinds of investigation as central at the same time. We may call these reductive investigation and eductive investigation.

Reductive investigation consists in examining relevant ingredients within a person's life by exploring these ingredients "backward" toward the more primal stages, phases, or stretches of its constitution in situations. How did each one of these come to be what it is (although not in causal terms)? Reductive investigation is the investigation of the increasingly more tacit stages of these ingredients which may be feelings, experiences, or consciousings of persons. In what ways did each relevant ingredient come to be what it is now as it becomes the object of reflection in a given person's life?

Eductive investigation consists in examining relevant ingredients within a person's life which are issued forth. Emphasis here would be placed upon the processes of drawing forth, upon the ways through which parts of learning become wholes, of wholes dissembling into parts. Elicited meanings and values would be investigated. This kind of reflection would be performed by clarifying all of these ingredients and their processes through the stages, phases and stretches of their development out of conditions of their rudimentary, latent, and tacit (or even their merely potential or possible) existence within persons' lives.

Notes

[1] "Phenomenology is, in the 20th century, mainly the name for a philosophical movement whose primary objective is the direct investigation and description of phenomena as consciously experienced, without theories about their causal explanation and as free as possible from unexamined preconceptions and presuppositions." Herbert Spiegelberg, "Phenomenology," Encyclopedia Britannica, Chicago: Encyclopedia Britannica, Inc., 1973.

[2] This is my neologism. When added to the verb, the "-ive" suffix always creates a word on Latin analogies intending "having a tendency to," or "having the nature, character, or quality" of that verb. Words so constructed sometimes may be used as nouns.

[3] This is my neologism, and it is crucial to my phenomenological investigations. The term "consciousing" is constructed from con, with, together, and scire, to know. Hence, consciousing means knowing-together, or knowing in such primitive and intimate form that all knowing and all cognitive activities of persons are constituted partly through it. I also use this construction in the form "I conscious," paralleling "I feel" and "I experience."

[4] Carefully designed research programs should investigate the specific emergence of the will-to-learn in given persons' willingness to learn in carefully circumscribed projects within their lived worlds. What I do in this paper is philosophical exploration basic to such research programs.

[5] See William James, The Principles of Psychology, I, II, New York: Henry Holt Co., 1890; The Will to Believe, Cambridge: Harvard University Press, 1979. Hereafter references will be to PP or WB, followed by page numbers. Alfred Schutz, Collected Papers, I, ed. Maurice Natanson, The Hague: Martinus Nijhoff, 1962, referred to hereafter as CP, I, followed by page numbers. Alexander Pfänder, Phenomenology of Willing and Motivation, ed., Herbert Spiegelberg, Evanston: Northwestern University Press, 1967, hereafter referred to in the text as PWM, followed by page numbers. See also Nicolai Hartmann, Ethics, Vols. I, II, and III, trans. Stanton Coit, New York: The Macmillan Company, 1932, and hereafter referred to in the text as E I, E II, or E III, followed by the page numbers. See also Alfred Schutz, Reflections on the Problem of Relevance, ed. Richard M. Zanet, New Haven: Yale University Press, 1970, hereafter referred to as RPR, followed by page numbers.

L'AIDE À L'APPRENTISSAGE CHEZ LES AUTODIDACTES

Nicole Tremblay, Ph.D.*

INTRODUCTION

Il existe, dans divers milieux éducatifs, des activités axées sur le respect de l'autonomie de l'adulte: régimes individualisés d'apprentissage, services aux autodidactes, groupes autonomes d'apprentissage. Les approches qui sont alors privilégiées remettent en cause les rôles traditionnellement dévolus à l'éducateur et à l'apprenant. Une analyse de ces expériences novatrices révèlent que les impacts matériels et techniques ont été habituellement étudiés alors que les impacts sur les deux protagonistes de l'acte d'apprendre semblent avoir été négligés. Ces changements dans les rôles ne sont pas sans effet sur les besoins de l'apprenant et sur les compétences nécessaires à l'éducateur. La présente recherche tente de répondre à quatre questions portant sur l'aide à l'apprentissage en situation d'autonomie: quels sont les besoins d'aide d'un apprenant autonome? quelles difficultés rencontre-t-il? Comment choisit-il les personnes-ressources qui l'aideront? quelles compétences particulières une personne-ressource doit-elle posséder afin d'aider adéquatement?

L'analyse de divers écrits sur l'autonomie pose un problème au chercheur. Il existe une profusion de termes et un même terme ne recouvre pas nécessairement la même réalité. Une expérience d'enseignement programmé, par exemple, et une activité d'apprentissage auto-dirigée peuvent être présentées comme une activité autodidactique. La terminologie ne rend pas toujours compte du niveau et de la marge d'autonomie de l'apprenant. En situant l'autonomie sur un continuum, il existe, à un extrême, des apprenants dont la seule marge de manoeuvre est de pouvoir aller à leur rythme et, à l'autre, des apprenants qui sont totalement libres quant au choix du contenu, des moyens et de la démarche d'apprentissage. Afin d'éviter toute forme de distorsion due à une formule pédagogique ou à une technique d'apprentissage, seuls les apprentissages autodidactiques seront étudiés. Les autodidactes jouissent d'une autonomie totale quant à la gestion de leur projet éducatif et ils ne sont assujettis à aucune norme pédagogique ou scolaire. Des recherches sur les projets auto-planifiés et des sondages révèlent que plusieurs personnes entreprennent, de leur propre chef, des projets d'apprentissage variés, y consacrent parfois beaucoup de leur temps et demandent l'aide de diverses ressources.

Puisque Allen Tough fournit une définition opératoire d'un projet auto-planifié et présente des inventaires des ressources dont se servent ceux qui apprennent par eux-mêmes, il a largement inspiré le cadre référentiel de la recherche sur l'aide à l'apprentissage.

La définition qu'il donne d'un projet d'apprentissage auto-planifié a été reprise et légèrement modifiée. Le fait qu'un projet d'apprentissage soit planifié à 51% par la personne elle-même n'a pas semblé une norme assez élevée pour parler d'autodidaxie; en effet, une personne pourrait alors s'en remettre une fois sur deux à un tiers pour planifier. La cote de 51% a été élevée à 80% tant pour la planification, l'organisation que l'évaluation du projet. Ainsi le haut niveau d'autonomie de l'autodidacte semble mieux respecté tout en reconnaissant que, dans une certaine mesure, il peut avoir recours à l'aide d'un tiers dans la gestion de ses activités. Puisque dans certaines approches éducatives, une grande marge de liberté et d'initiative est laissée à un apprenant, il a paru nécessaire d'indiquer que le projet d'un autodidacte se poursuit hors des institutions scolaires ou de tout autre agent éducatif, respectant ainsi une caractéristique tant sociologique qu'historique de l'autodidacte. Les diverses composantes du projet d'apprentissage sont les suivantes: 1. une série d'épisodes interreliés totalisent 40 heures (une semaine de travail) à l'intérieur de six mois; 2. où plus de la moitié (51%) de la motivation de la personne est d'acquérir des connaissances, des habiletés ou de changer des attitudes; 3. cette personne veut retenir ce qu'elle acquiert pour au moins deux jours; 4. la personne elle-même a identifié ses besoins et fixé le but dans une proportion d'au moins 51%; 5. elle assume les opérations de gestion de son projet dans une proportion de 80%. Elle ne relève d'aucune institution éducative ou de tout autre agent formel dans le cadre de ce projet. C'est à partir de ces éléments opérationnels que seront étudiés les projets d'apprentissage des autodidactes.

---

* Section d'andragogie, Faculté des sciences de l'éducation, Université de Montréal, Case postale 6203, Succursale "A", Montréal (Québec), H3C 3T3

Les diverses ressources dont les autodidactes peuvent se servir dans leur apprentissage ont également été empruntées à Allen Tough. Une pré-expérimentation a cependant permis d'ajouter quelques catégories à celles déjà existantes. Les catégories d'agent d'accueil et d'experts reconnus socialement ont été ajoutées à celles des intimes, des bibliothécaires, des vendeurs, des collègues d'apprentissage, des connaissances et des professionnels. Pour le matériel, les catégories conférences et documents officiels ont été ajoutées au matériel didactique, aux journaux, dépliants, livres, émissions de télévision ou de radio, aux disques, aux cassettes et aux films.

METHODOLOGIE

Les éléments opérationnels de la définition du projet d'un autodidacte ont permis de repérer le type de projet à analyser dans le cadre de la recherche. L'inventaire des catégories de ressources a permis aux autodidactes de se remémorer l'aide dont ils avaient pu avoir besoin.

Compte tenu du caractère exploratoire de la recherche, il a été décidé de procéder par entrevues semi-structurées. A partir des personnes et du matériel qu'ils ont avoué avoir consulté, les autodidactes ont eu à décrire les besoins alors ressentis, les difficultés recontrées, les critères privilégiés dans le choix de la ressource ainsi que les compétences et qualités qui en avaient fait un aidant efficace ou encore les compétences et qualités qu'ils auraient souhaité retrouver afin que l'aide apportée soit efficace. De ces entrevues en deux temps, d'une durée moyenne totale de quatre heures, il a été possible de recueillir près de 2 000 énoncés sur divers aspects de l'aide. Ces énoncés proviennent d'un groupe de vingt autodidactes. L'échantillon était composé d'autant d'hommes que de femmes également répartis dans deux tranches d'âge (34 ans et moins et 35 ans et plus). Les autodidactes interrogés appartenaient à une association volontaire à titre de bénévole. Pour être interrogés à titre d'autodidactes, ils devaient avoir été ainsi identifiés par le directeur de l'association dont ils faisaient partie et par deux personnes de leur milieu. Le critère de la reconnaissance sociale a présidé au repérage de la population.

Une analyse de contenu d'environ 2 000 énoncés commande d'imaginer une stratégie systématique et prudente. Un processus de réduction des énoncés accompagné d'une validation appropriée a permis de proposer des typologies de l'aide. Cette réduction s'est faite en trois phases. Dans un premier temps les synonymes ont été rassemblés; un jury de trois personnes travaillant séparément devait faire consensus à 100%. La phase suivante devait permettre un premier regroupement logique des synonymes; cette phase de "sous-catégorisation" a été accompagnée d'une validation d'un jury de cinq personnes qui devaient faire consensus à 80%. Enfin la catégorisation finale a été soumise à deux jurys de cinq personnes qui devaient également faire consensus à 80%. Ce long processus de réduction qui a duré un an permet de décrire de façon cohérente et systématique divers aspects de l'aide en situation d'autodidaxie.

RESULTATS

Les autodidactes interrogés déclarent avoir planifié eux-mêmes plus de douze projets par année en moyenne et y avoir consacré un peu plus de 1 000 heures. Ces résultats sont deux fois plus élevés que les moyennes habituelles. (cinq projets/année et 500 heures/année) et peuvent s'expliquer du fait que ces personnes étaient reconnues par le milieu pour leur propension à apprendre seul. Les résultats qui suivent décrivent divers aspects de l'aide à l'apprentissage et proviennent de l'analyse du projet auquel l'autodidacte a consacré le plus de temps.

Les besoins d'aide

Les besoins se regroupent sous cinq catégories: la gestion du projet, l'acquisition de connaissances ou d'habiletés, l'obtention de ressources, la maîtrise d'habiletés didactiques et l'obtention de support.

Les autodidactes ont besoin d'aide tant pour planifier, organiser et évaluer leurs apprentissages. Plus précisément, il tentent d'établir un pronostic en envisageant les difficultés prévisibles et évaluent globalement leurs chances de succès avant de commencer. Ils tentent également de cerner et préciser leur objectif d'apprentissage et d'identifier une marche à suivre. Certains doivent également réorganiser leur horaire ou déléguer certaines de leurs tâches afin de se doter des conditions matérielles nécessaires. Enfin, les modes d'évaluation des apprentissages des autodidactes sont assez particuliers: il se comparent à une personne jugée plus expérimentée, font critiquer leur travail ou leurs idées par un pair ou choisissent délibérément de se confronter à une personne qui ne pense pas comme eux ou qui procède différemment.

D'autres besoins d'aide ont trait à la maîtrise d'un contenu ou d'une habileté ou encore à la connaissance des diverses ressources humaines ou matérielles du milieu. Les ressources recherchées par l'autodidacte ne lui servent pas qu'à acquérir des connaissances. Certains services, sans lien direct avec le projet d'apprentissage, sont demandés (ex.: un local, de l'argent, un moyen de transport, service de dactylographie ou de photocopie).

Les autodidactes ont parfois besoin d'aide afin de maîtriser des habiletés didactiques. Ils essaient de choisir une ressource, d'établir les liens entre la théorie et la pratique ou encore de poser un diagnostic face à une difficulté.

Certains besoins d'aide possèdent des caractéristiques plus émotives. Les autodidactes ont besoin de support afin de maintenir ou augmenter leur motivation, de croire en leur potentiel ou de vaincre l'isolement dans lequel ils se trouvent.

Ce qui précède résume à grand trait le contenu des typologies sur les besoins d'aide. Certains besoins sont mentionnés plus fréquemment par un plus grand nombre d'autodidactes: évaluer sa compétence (80%), obtenir le matériel nécessaire (70%), établir un pronostic (50%) et connaître les ressources du milieu (50%).

Les difficultés rencontrées

La typologie des difficultés présente, à peu de choses près, les mêmes éléments que celle des besoins. Ceci porte à croire que l'acuité de certains besoins et l'impossibilité de trouver dans les délais raisonnables l'aide désirée peut faire qu'un besoin s'exprime en terme de difficulté. Il est à noter que le nombre d'énoncés concernant les difficultés est peu élevé (188 énoncés sur la masse des 2 000). Est-ce à dire que les autodidactes trouvent assez facilement une aide efficace, qu'ils n'entreprennent que des projets qu'ils se jugent capables de réaliser ou qu'ils réajustent des éléments du projet de manière à contourner les difficultés? La recherche ne permet pas de répondre. Il n'existe qu'une seule difficulté qui soit mentionnée par plus de la moitié des interviewés: croire en son potentiel (75%). Toute autre difficulté ne concerne qu'une minorité d'autodidactes.

Les critères de choix d'une ressource

Il existe quatre types de choix: les choix dits "orientés" (faits suite à une recommandation), les choix délibérés (effectués de sa propre initiative), les choix fortuits (dus au hasard) et les choix forcés (lorsqu'il n'y a qu'une ressource disponible ou accessible). Ce sont les choix dit "orientés" qui sont les plus fréquents et dénotent ainsi une certaine prudence de la part des autodidactes.

Les interviewés déclarent choisir une ressource en fonction de la compétence qu'elle est réputée posséder (95%), des qualités humaines qu'on lui attribue (90%) et de l'intérêt qu'elle partage pour le même sujet d'étude (85%). Ces critères font ressortir l'égale importance accordée à la compétence et aux qualités nécessaires à une relation interpersonnelle agréable ou satisfaisante.

Les compétences et qualités d'un aidant

Les compétences et qualités de celui qui tente d'aider l'autodidacte se regroupent autour de quatre thèmes: la gestion, le contenu, la communication et les relations interpersonnelles.

Les compétences d'aide à la gestion d'un projet d'apprentissage (planification, organisation, évaluation) sont peu nombreuses et sont mentionnées par moins du tiers des interviewés. Une personne-ressource devrait être capable de faire clarifier le but visé, d'anticiper les difficultés et d'évaluer la compétence de celui qui la consulte.

Les compétences reliées au contenu de l'apprentissage se résument à la maîtrise du champ d'étude et à une bonne connaissance des diverses ressources humaines et matérielles disponibles dans le milieu.

Une personne qui désire aider l'autodidacte doit démontrer des habiletés dans l'art de communiquer. Elle sait parler et expliquer clairement en plus de faire preuve de perspicacité en saisissant rapidement ce qui lui est demandé. L'approche utilisée, si elle veut rencontrer les exigences d'un autodidacte doit être souple; l'aidant sait s'ajuster à la personnalité de l'autre et adapter sa démarche à celle que l'autodidacte privilégie. Une forme de non-directivité est également souhaitée; une personne-ressource n'impose jamais sa façon de voir ou de faire et amène l'autre à trouver lui-même la solution. Enfin, un aidant fait preuve de prudence en écoutant attentivement avant de répondre et en s'assurant d'être bien compris. La capacité de stimuler la curiosité intellectuelle est recherchée par certains autodidactes.

Les autodidactes interrogés énumèrent diverses qualités susceptibles, à leurs yeux, d'assurer une relation interpersonnelle favorable à l'apprentissage. Ces qualités sont nombreuses. En les réunissant toutes, il est possible de tracer un portrait-type d'un aidant efficace et idéal. Cette personne sait accueillir l'autodidacte avec chaleur, elle se montre disponible, inspire confiance et fait confiance à l'autre, elle lui manifeste du respect et de l'intérêt, elle sait prodiguer des encouragements aussi souvent que nécessaire, se montre franche en tout temps et sait créer un climat détendu lorsque cela s'impose..

Certaines compétences ou qualités sont plus souvent mentionnées. Pour 90% des interviewés, la qualité de l'accueil s'avère déterminante lors de la consultation d'une personne-ressource. Pour 80% d'entre eux, un aidant efficace maîtrise le contenu d'apprentissage, sait communiquer clairement et fait preuve de prudence lors de l'interaction. La majorité des compétences et qualités contenues dans cette dernière typologie, ont été mentionnées par plus de la moitié des autodidactes. Elle indique donc un ensemble de tendances ou de points de convergence plus marqués que dans les typologies qui précèdent.

CONCLUSION

Les typologies de l'aide dont les contenus viennent d'être décrits permettent d'identifier quatre dimensions avec lesquelles l'éducateur ou l'apprenant a à composer dans un processus d'aide à l'apprentissage:

1. le contenu: aider à acquérir des connaissances, des habiletés ou à changer des attitudes.
2. les outils: aider à trouver les resssources humaines et matérielles nécessaires.
3. la démarche: aider à gérer (planifier, organiser, évaluer) un projet d'apprentissage.

4. le climat: aider à établir une relation qui supporte et facilite l'apprentissage.

La capacité de composer adéquatement avec chacune de ces dimentions présente un défi à quiconque tente d'interagir avec des apprenants qui déclarent vouloir respecter leur liberté d'action, leur rythme d'apprentissage, leur possibilité de n'apprendre que ce qu'ils jugent nécessaires ou intéressants et de faire servir, dans certains cas, leurs acquis dans l'immédiat. C'est ce qu'une question ouverte, posée en fin d'entrevue, a permis d'idenfifier comme principales raisons pour se placer en situation d'autodidaxie.

Il serait heureux que la présente recherche puisse inspirer divers milieux où le respect de l'autonomie constitue un facteur important: expériences d'approche par projet en milieu institutionnel, choix de l'autoformation comme moyen d'actualisation des connaissances chez des professionnels en exercice, support à la recherche auprès d'étudiants gradués ou de praticiens du champ éducatif.

D'autres pistes de recherche s'ouvrent également. Il semble que certains services de la société seraient à réaménager ou à inventer afin de répondre adéquatement aux diverses demandes des autodidactes. Il semble qu'il serait nécessaire de se familiariser davantage avec le style ou la démarche d'apprentissage des autodidactes afin d'adopter un type d'intervention adéquat. Ces recherches s'inscriraient en continuité avec cette recherche sur l'aide à l'apprentissage et avec toutes celles qui ont contribué à démontrer que le phénomène de l'autodidaxie est important même à une époque où les adultes sont largement sollicités par divers organismes et services voués à l'éducation.

REFERENCES

CACERES, B. (1967). Regard neuf sur les autodidactes. Seuil, Paris.

HARGREAVES, D.H. (1972). Interpersonal Relations and Education. Routledge and Kegan, London.

KNOWLES, M.S. (1975). Self-directed Learning; a guide for learners and teachers. Associated Press, Follett Publ. Chicago.

KULICH, J. (1970). An Overniew of the Adult Self-learner. International Congress of University Adult Education Journal, 13.

LONG, H.B., ASHFORD, M.L. (1976). Self-directed Inquiry as a Method of Continuing Education in Colonial America. The Journal of General Education, 28.

REINHART, E. (1977). Independant Study; on option in Continuing Education. Journal of Continuing Education in Nursing, 8, 1.

TOUGH, A. (1971). The Adults' Learning Projects. O.I.S.E., Toronto.

TOUGH, A. (1977). Major Learning Efforts; recent research and future directions. Unpublished paper, O.I.S.E., Toronto.

A POWER ANALYTIC INVESTIGATION OF RESEARCH IN ADULT EDUCATION: 1970-1982

Russell F. West*
East Tennessee State University

INTRODUCTION

Research efforts in the field of adult education have become more sophisticated within the last decade, in terms of both quantitative and qualitative research methods (Hiemstra and Long, 1980). Although new and more complex research strategies are being employed by adult education researchers, empirical research studies have been subject to a great deal of criticism within the last few years because of apparent methodological difficulties (Boyd, 1980). In fact, Rubenson (1982) has called into question the methodological quality of adult education research by suggesting that researchers have failed to examine the technical standards of their work. With the increased social emphasis upon the continued learning of adults in society, it appears that methodological quality will become even more critical in the years ahead, as researchers attempt to generate and verify theoretical schemes in such diverse areas as adult development, educational participation, self-directed change and educational gerontology. An increased emphasis must be placed upon the correct use of a variety of research tools such as observation, instrumentation, sampling techniques (statistical and theoretical), categorization techniques, statistical analysis procedures and the computer.

One methodological tool, statistical analysis, has been subject to much abuse over the years. Specifically, the power of published statistical tests has been at issue in such diverse fields as communication, gerontology and medicine. The power of a statistical test refers to the probability that the test will allow researchers to correctly reject a given null hypothesis, and is one of the most neglected considerations in the planning and reporting of research studies. If researchers are to have confidence in the growing body of adult education research literature, it is critical that more attention be given to careful design and reporting of classical quantitative methods and in particular, to the statistical power of reported statistical tests.

The Concept of Statistical Power

While the concept of statistical power has been described in detail elsewhere (Cohen, 1977), a brief restatement will be presented below. Statistical power is, by definition, the probability that a statistical test will lead researchers to reject a given null hypothesis, when the null hypothesis is, in fact, false. Power is represented as $1-\beta$, where β represents the probability of making a type II error (i.e. failing to reject the null hypothesis when the null is false). The power of a statistical test is a function of three factors, which should be taken into consideration by the researcher prior to undertaking a study; the alpha level or level of significance (α), effect size (ES) and sample size (n).

The alpha level represents the level of risk the researcher is willing to take that he/she will reject the null hypothesis when, in fact, the null hypothesis is true. This is sometimes referred to as a false rejection. By convention, the two most commonly appearing levels are .05 and .01. The researcher sets the alpha level before the statistical analysis is carried out and compares the obtained p-value with this pre-set level of significance. A second determinant of statistical power is the "effect size," which refers to the extent to which an alternate hypothesis is true in the population. Effect size represents the major indeterminancy in the calculation of statistical power. Essentially the researcher must ask the question, how large or small an effect am I trying to uncover with my statistical test? Operational definitions have been proposed for small, medium and large ES, although the specific computational formula varies with the type of statistical test being used. The ES for a two-tailed t-test between two independent samples would be calculated by the following formula:

---

*Assistant Professor, Section of Medical Education, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, Tennessee 37614.

$$ES = \frac{M_a - M_b}{\sigma}$$

where ES = the standardized effect size, M_a, M_b = population means expressed in terms of original measurement units, σ = the common within population standard deviation. The ES for the t-test is thus found by dividing the difference between group means by the common within population standard deviation. In the actual conduct of a study, the actual ES can not be known in advance, so the researcher must estimate the ES of interest based on knowledge of theoretical considerations or prior research in the field. A third determinant of statistical power is the sample size. Power has been shown to be a monotonically increasing function of sample size, when holding other determinants constant; i.e. the larger the sample size, the higher the statistical power of the test. Consider the following example taken from the power tables of Cohen (1977). Using a two-tailed t-test where $n_1 = n_2$ and $\alpha = .05$, the n required to detect a small difference between groups with a power of .80 (80 times out of 100) is equal to 390 (per group). If the desired power is adjusted downward to .50 (50 times out of 100), the required n would equal 195 (per cell).

A clear relationship has also been shown to exist between effect size (ES) and sample size (n), other factors being equal. The smaller the effect size that one is interested in detecting, the greater the number of subjects needed to allow detection. Thus, as the effect size increases (i.e. the researcher is interested in only detecting large or more obvious effects), the sample size needed to maintain a specified level of power becomes smaller. The minimum acceptable level of power for a statistical test has been given by Cohen (1977) as .80. The researcher should be confident that roughly 80 times out of 100, the null hypothesis will be rejected when an effect does exist.

There are several possible difficulties resulting from a failure to consider statistical power while designing a research study. First, low statistical power may prevent a researcher from finding a statistically significant effect, that actually does exist. Second, statistical power estimates allow for a more substantive interpretation of why a given statistical test failed to reach statistical significance, given that the power considerations were made in a priori fashion. Finally, given the emphasis on "positive" research results, low statistical power may in fact keep important pieces of research from appearing in the adult education literature. Since Cohen's

(1962) seminal article, statistical power analyses have been undertaken in a number of different fields. Based on his analysis, Cohen found that generally, researchers had:

> . . .a relatively (or even absolutely) poor chance of rejecting their major null hypotheses, unless the effect they sought was large. . .(p. 151). . .the consequences of this state of affairs are fairly obvious. If many investigators are running high risks of failing to detect substantial population effects, much research is resulting in spuriously "negative" results. . .(p. 153)

Brewer (1972) surveyed the power of statistical tests reported in the American Educational Resource Journal (AERJ) between November 1969 and May 1971, and found that a very high percentage of the tests had less than a 50/50 chance of making a valid rejection, while Penick and Brewer (1972) found the power of statistical tests in the Journal of Research in Science Teaching to be "disturbingly low" (p. 377). Low statistical power has also been found in a survey of nine speech communication journals (Chase and Tucker, 1975), where researchers found that Cohen's .80 power criterion was only met when large effect sizes were considered. Brewer and Owen (1973) surveyed the Journal of Educational Measurement and found that the average power of the statistical tests used was less than .5 for small effect sizes. However, several researchers have found statistical power estimates to be approaching Cohen's .80 criterion (Chase and Baran, 1976; Chase and Chase, 1976). Examining attitude research published in the Gerontologist and Journal of Gerontology, Levenson (1980) found the statistical power of tests used to be "impressively high" (p. 496), particularly for medium and large effect sizes.

The purpose of this study was to determine the methodological soundness of quantitative research published in Adult Education between 1970 and 1982, with regard to the statistical power of the reported statistical tests. The study provided for an assessment of the technical adequacy of the statistical tests and allowed comparisons to be made with similar power analyses conducted in other fields.

METHOD

To determine the level of statistical power found in adult education research, a total of 167 major articles published in volumes 21 to 32 in Adult Education were reviewed in this survey. As each article was read the following information was recorded; the type and number of statistical tests performed, the stated level of significance and the sample size. When a statistical test of the null hypothesis was shown, but no significance level reported, it was assumed that the traditional .05 level of significance was adopted. If no direction was indicated in the alternate hypothesis, a two-tailed test was assumed. Using this information the power of the statistical tests for small, medium and large effect sizes were read directly from the tables of Cohen (1977), using Cohen's definitions for the effect size. To achieve consistancy between this study and other statistical power surveys, only 4 of the most common tests of statistical significance were analyzed: t-tests (t), Pearson-product moment correlations (r), F-tests (F), and chi-square tests (X^2).

One hundred and two of the major articles were excluded from this analysis due to a lack of reported statistical tests (e.g. a literature review), a lack of complete reporting of information, or because no formulae were available to calculate power for certain data analysis procedures (e.g. discriminant analysis). The number of each type of statistical test performed per article was determined along with the mean power estimates of each article for small, medium and large effect size. Therefore the unit of analysis for this study was the individual research article.

RESULTS

Of the 65 studies analyzed in this study, none made reference to the concept of statistical power and the bearing that it might have upon the study results. Of the 1666 statistical tests analyzed, the most commonly reported test was the Pearson-product moment correlation coefficient. While over one-half (54%) of the reported tests were correlation coefficients, another 20% of the total number were t-tests, perhaps reflecting a practice of adult education researchers to test large matrices of correlation coefficients and perform multiple t-tests when analyzing data. The F-test was utilized less frequently (12%) and may reflect the tendency to rely more heavily upon surveys and less upon more complex research designs which require analysis of variance data analysis techniques. This finding is in contrast to research in other fields which found the F-test to be one of the most frequently occurring statistical tests (Penick and Brewer, 1972; Chase and Chase, 1976). Fourteen percent of the reported tests were chi-square tests. The mean number of tests reported per article was 25.8.

The distribution of sample sizes found in the 65 studies had a definite positive skew. While the mean sample size was 152.25, the median sample size was much smaller (76). Several large surveys contributed to this positive skew in the distribution. Sixty-seven percent of the studies reported sample sizes of less than 100. Given the direct relationship between the power of a statistical test and sample size, many of the researchers had a very small chance of correctly rejecting their null hypothesis, because of the small sample.

The statistical power for small, medium and large effect sizes of the 65 articles from Adult Education are shown in Table 1. This table clearly shows the low statistical power existing when researchers are interested in small effects. The mean power of the tests surveyed was .22 and the median .15, when researchers were interested in detecting small effects. In one-half of the tests analyzed, researchers had less than a 16 out of 100 chance of correctly rejecting the null hypothesis. The power was somewhat higher for medium effect size (mean = .66, md = .71), while it was high for a large effect size; i.e. when researchers were only interested in detecting gross effects, the probability of making a correct rejection was quite high (mean = .88, md = .99). In terms of Cohen's .80 power criterion, 98% of the tests fell below the criterion at a small effect size level, while 60% and 20% fell below this criterion, for medium and large levels of effect size, respectively.

A comparison was made between the statistical power estimates found in this analysis and estimates found in comparable studies made in other disciplines. The relative absence of statistical power for tests conducted to detect small effects, is a problem found throughout the social sciences. Generally, for small and medium effect sizes, the estimates are less than acceptable. Across all disciplines, it is only when large effect sizes are considered, that the probability of making a correct rejection of the null becomes sufficiently high.

Table 1 - Frequency and Cumulative Percentage Distributions of the Mean Power of 65 Articles in Volumes 21 to 32 of Adult Education

	Effect Size					
	Small		Medium		Large	
Power	Freq.	Cum %	Freq.	Cum %	Freq.	Cum %
.90 - .99+	1	100	16	100	45	100
.80 - .89	0	98	11	77	8	32
.70 - .79	2	98	9	60	3	20
.60 - .69	2	95	3	46	4	15
.50 - .59	2	92	7	41	1	9
.40 - .49	3	89	6	30	1	7
.30 - .39	5	84	5	21	2	5
.20 - .29	6	77	4	13	0	2
.10 - .19	28	68	3	7	1	2
.00 - .09	16	25	1	2	0	0
Totals	65		65		65	
Mean	.22		.66		.88	
Median	.15		.71		.99	

DISCUSSION AND IMPLICATIONS

The statistical power of the tests used in Adult Education between 1971 and 1982 have been found to be fairly low, but are not inconsistent with the results of similar analyses reported in other disciplines. This finding takes on greater meaning under the assumption that the research appearing in Adult Education is the "best" the field has to offer; i.e. the power of published tests probably is higher than the levels found in adult education research that does not make it into Adult Education. The implications of this low level of statistical power are clear. A good deal of the adult education research is being conducted under conditions that inhibit the detection of effects which may, in fact, exist. However, due to a small sample size, detection is not probable, particularly if the effect is small. This problem is more glaring when publication criteria are considered. Editorial boards may be biased in their selection of papers which show statistically significant results. Similarly, researchers may choose to reject results which do not lead to the rejection of the null hypothesis. This calls into the question the generalizability of the research that does appear in print. Another problem associated with selection problems concerns the inflation of the probability of "false positive" results which appear, as a result of the differential selection of papers that do come up with "statistically significant" results (Cohen, 1977). The power of statistical tests is most appropriately considered *a priori*, or before one begins a study. Unfortunately this is often a neglected consideration. By establishing, *a priori*, the level of significance or alpha level (α), the desired level of statistical power, the effect size he/she hopes to detect, and the type of test to be used, the researcher can determine the sample size that would be needed, by consulting statistical power tables such as those provided in Cohen (1977).

One serious flaw in the research appearing in Adult Education has been the lack of a complete reporting of the statistical methods employed in a study. Many writers do not provide the minimal amount of information, which should include at least the following: 1) n or sample size, 2) α or significance level, 3) cell means and standard deviations, 4) the research design plan, 5) value of the statistical test statistic and associated p-value. By providing this type of information, the researcher will at least allow those reading the research to make their own assessment of quality. Finally, the editorial policies of Adult Education should require that these essential pieces of information be included in every quantitative manuscript reviewed, along with a discussion of all a priori design considerations. The determination of expected statistical power prior to statistical testing and the precise reporting of α, n, effect size and the estimated power of a given statistical test would result in the general upgrading of the quality of research found in the field of adult education and make the interpretation of the research results much easier for the consumer of that research.

REFERENCES

Boyd, R.D. "Central Issues in Scientific Methodology" in Changing Approaches to Studying Adult Education, ed. H.B. Long and R. Hiemstra. Jossey-Bass: San Francisco. 1980.

Brewer, J.K. 1972. On the Power of Statistical Tests in the American Educational Research Journal. American Educational Research Journal. 9:391-399.

Chase, L.J. and Baran, S.J. 1976. An Assessment of Quantitative Research in Mass Communication. Journalism Quarterly. 53:308-311.

Chase, L.J. and Chase, R.B. 1976. A Statistical Power Analysis of Applied Psychological Research. Journal of Applied Psychology. 61:234-237.

Chase, L.J. and Tucker, R.K. 1975. A Power-Analytic Examination of Contemporary Communication Research. Speech Monographs. 42:29-41.

Cohen, J. Statistical Power Analysis for the Behavioral Sciences (2d edition). Academic Press: New York. 1977.

Cohen, J. 1962. The Statistical Power of Abnormal-Social Psychological Research: A Review. Journal of Abnormal and Social Psychology. 65:145-153.

Hiemstra, R. and Long, H.B. "Epilogue" in Changing Approaches to Studying Adult Education, ed. H.B. Long and R. Hiemstra. Jossey-Bass: San Francisco. 1980.

Levenson, R.L. 1980. Statistical Power Analysis: Implications for Researchers, Planners, and Practitioners in Gerontology. The Gerontologist. 20:494-498.

Penick, J.E. and Brewer, J.K. 1972. The Power of Statistical Tests in Science Teaching Research. Journal of Research in Science Teaching. 9:377-381.

Rubenson, K. 1982. Adult Education Research: In Quest of a Map of the Territory. Adult Education. 32:57-74.

Adult Education Faculty Characteristics, Activities, Satisfactions, and Career Attitudes

Reynold Willie, Harlan Copeland, and Howard Williams
University of Minnesota

Introduction

Prior to the 1950's the literature of higher education contained several speculative writings but very few empirically based studies on colleges and universities as social institutions. Since the mid-1950's, responding first to problems brought about by soaring enrollments and proliferation of new programs and services and later by declining enrollments and retrenchments, many researchers have focused their attention on higher education and have produced several national and many local studies of college and university professors (e.g., Caplow and McGee, 1958; Stecklein and Eckert, 1958; Ladd and Lipset, 1975-76; Baldridge, Curtis, Echer, and Riley, 1978). Yet, even now, despite the studies of the last three decades, the information about faculties and their work is viewed as meager, sporadic, and dated (National Education Association, 1979). It is on this information base that, under threat of financial exigency, far reaching program and personnel decisions in higher education are being made today.

This study was undertaken to gain information about the adult education faculties of Canada and the United States and the quantitative and qualitative dimensions of their work. It was designed to answer such questions as the following: Who are the people who comprise the adult education professoriat? What led them to their present positions in higher education? In what professional activities do they spend their time? Are they satisfied with their jobs and their careers? Do they reaffirm their career choice at this time in their lives? Answers to these questions may help those in decision-making positions to make sounder decisions in these very difficult years. This paper reports some of the answers.

METHODOLOGY

The study took the form of survey research. The Spring 1982 membership roster of the Commission of Professors of Adult Education was used as the subject source. After eliminating those not meeting the subject definition of the study--a currently active professor of adult education appointed on at least a half-time basis to the faculty of an accredited institution of higher education in Canada or the United States, 215 professors remained as potential participants in the study.

A questionnaire was used as the information gathering tool. It was adapted from one developed and used by Stecklein and Eckert (1958), Eckert and Williams (1972), and Willie and Stecklein (1982) in a series of studies of Minnesota college and university professors. Most questions were phrased in closed form with respondents being asked to select from a list of phrases one or

---

Curriculum and Instruction, College of Education, 175 Peik Hall, 159 Pillsbury Drive SE, Minneapolis, Minnesota 55455

more that described them or their positions. An other category was included with some questions to accommodate unexpected responses. Several questions were phrased in open form with respondents being asked to generate statements about their feelings toward their jobs.

Questionnaires with follow up reminders were mailed to the 215 professors during April and May, 1982. One hundred and seventy-seven (82.3%) returned completed, usable questionnaires; 10 (4.7%) provided information that excluded them from the study; and 28 (13.0%) did not respond in time for inclusion in early analyses of data. (The number of non-respondents was reduced to 10.7 percent at the end of summer break when five professors returned completed forms. Their responses are not included in this report but will be included in subsequent analyses.)

The Statistical Package for the Social Sciences (SPSS) was used in the analyses of the data. Measures of central tendency were applied to selected frequency distributions and Chi-square tests of statistical significance of relationships among variables were applied to selected crosstablulations.

FINDINGS

The Respondents

The professors electing to participate in the study ranged in age from 29 years to 70 years with a mean age of 48.3 years and a median age of 47.6 years. The group included 31 women (17.5%) and 146 men (82.5%). Eighty-five percent (85.3%) were born in the United States and 8.5 percent in Canada. The regions of the United States given as birthplace by the greatest numbers of American and Canadian professors were the Midwest (21.5%), the South (20.3%), the Middle Atlantic States (13.0%), and, the Upper Midwest (11.3%). Fifty-seven percent (57.1%) of Canadian professors were born in Canada and 28.6 percent in the United States. Ninety-six percent (96.0%) of American professors were born in the United States and 2.0 percent in Canada.

Eighty-six percent (86.4%) taught in American and 13.6 percent in Canadian colleges and universities; 42.9 percent were professors, 35.0 percent associate professors, and 21.5 percent assistant professors. Nearly half (49.2%) reported an administrative position with department or program head the most frequently reported title (25.1%). The next most frequenly reported title (5.1%) was one indicating coordination of an all-college or all-university activity. Two-thirds of the Canadian professors (66.7%) reported an administrative position while only 46.4% of the American professors did so. Adult education was given as the primary teaching assignment by 59.3 percent of the respondents, extension education by 6.2 percent, human resource development by 5.6 percent, adult literacy by 2.8 percent, educational gerontology by 1.7 percent, vocational and technical education by 1.1 percent, and "other" by 6.8 percent. More than one primary teaching area was mentioned by 16.4 percent of the professors.

More than two-thirds of the respondents (68.4%) indicated that their adult education positions were full-time. Nearly equal percentages held nine and twelve month appointments (40.1% and 41.2%, respectively). However, only 34.6 percent of the American professors held twelve month appointments while 83.3 percent of the Canadians did so. A ten month appointment was reported by 10.2 percent and an eleven month appointment by 7.3 percent.

Ninety percent (89.8%) of the respondents reported previous employment of a kind other than teaching adult education with 23.2 percent reporting teaching in Kindergarten-Grade 12 and 14.1 percent working in adult education areas. Thirty-six percent of the respondents (36.2%) reported adult education teaching positions elsewhere prior to their present position. The mean number of years in another adult education teaching position was 5.7 and the median number of years 3.4; the mean number of years in present position was 9.8 years and the median number of years 8.7.

Career Choice and Education

Half of the group (50.8%) recalled a non-education career goal at college entry, one-fifth (20.3%) a secondary education career goal, and only one in twenty (5.1%) an adult education career goal. Slightly over one tenth of the group (11.9%) were undecided at that time. The percentage recalling a non-education career goal at receipt of the baccalaureate degree dropped to 33.3, the percentage reporting secondary education rose to 33.9, and the percentage giving adult education rose to 13.6. At the master's level non-education career goals were still recalled by 13.6 percent of the respondents while secondary education as a career goal was recalled by 20.9 percent, adult education by 32.8 percent, and higher education by 18.6 percent. At the doctoral level career goals in adult education were recalled by 18.2 percent and career goals in higher education by 68.9 percent.

Sixty percent (59.3%) of the respondents reported a non-education major in their undergraduate programs, 22.0 percent an elementary or secondary education major, and 13.0 percent a vocational technical education major. One respondent (0.6%) reported adult education as an undergraduate major. At the master's degree level the percentage of respondents reporting a non-education major dropped to 28.8 percent, an elementary or secondary education major to 13.0 percent, and a vocational technical education major to 7.9 percent. Twenty-seven percent (26.6%) reported an adult education major. At the doctoral level the most frequently given major was adult education (64.4%) and the second most frequently given major educational administration (7.9%). Five percent (5.6%) continued to report non-education majors.

Most of the respondents completed their degrees at midwestern and southern institutions. Forty-three percent (42.9%) completed their baccalaureate degrees at institutions located in the Midwest, Upper Midwest, and Plains States and 21.5 percent completed degrees at instititions located in the South; 41.8 percent completed master's degrees at institutions in the former group of states and 24.9 percent in the latter group; 49.7 percent earned doctorates at institutions in the Midwest, Upper Midwest, and Plains States and 23.2 percent at institutions in the South. The median year for receipt of the baccalaureate degree was 1957, of the first master's degree 1964; and of the doctorate 1970.

The Job: Professor of Adult Education

What led these professors to their present institutions? The challenge of the job was most often the reason selected from and ranked first, second, or third on a list of reasons compiled from the responses given by professors in other studies. Challenge of the job was selected by 58.2 percent of the respondents and ranked first by 27.7 percent, second by 17.5 percent, and third by 13.0 percent. Other reasons selected by at least one-fifth and ranked first, second, or third by at least one-tenth of the respondents were the program (ranked second by 12.4% and third by 11.3%), the geographical location of the institution (ranked second by 10.7% and third by 15.8%), the type of institution (ranked second by 13.6%), the faculty (ranked first by 10.2%), and the offer of a job (ranked first by 11.3%).

Participants in the study were asked to indicate a range in which their salaries fell and to give terms of appointment. To allow comparisons, the midpoint of the salary range of each American professor was divided by the reported term of appointment and multiplied by nine to yield an academic year salary. The midpoint of the salary range of each Canadian professor was multiplied by .834, the average annual currency exchange rate in effect at the time 1982 salaries were determined, before being subjected to the same treatment as American salaries. Table 1 presents a comparison of American and Canadian salaries.

Table 1. Canadian and American Salaries in American Dollars

	American				Canadian			
Annual Salary	All	Cf%	Full-time	Cf%	All	Cf%	Full-time	Cf%
15,000-19,999	7.9	7.9	6.0	6.0	4.3	4.3	5.3	5.3
20,000-24,999	26.3	34.2	26.0	32.0	30.4	34.7	36.8	42.1
25,000-29,999	22.4	55.6	27.0	59.0	52.2	87.0	39.1	89.5
30,000-34,999	25.0	81.6	22.0	81.0	4.3	91.3	0	89.5
35,000-39,999	11.8	93.4	12.0	93.0	8.7	100.0	12.5	100.0
40,000-44,999	5.3	98.7	5.0	98.0				
45,000 or over	1.3	100.0	2.0	100.0				

What percentage of their time in an academic year do professors of adult education ordinarily devote to the functions usually associated with the job? The median percentages of time devoted to each function by those indicating a full-time assignment in adult education were as follows: teaching, 39.8 percent; advising, 14.8 percent; research and scholarly writing, 10.4 percent; counseling, 9.9 percent; committee and administrative duties, 10.2 percent; off-campus service, 5.4 percent; and other activities, 10.3 percent.

Nearly ninety percent (87.6%) of the professors reported that they advise master's degree students with a mean number of 18.6 advisees. Sixty-nine percent reported that they supervise master's theses with a mean number of 7.9 students. A fourth of the respondents (24.3%) reported specialist advisees with a mean number of 4.3 advisees. Seventy-two percent (72.3%) reported doctoral degree advisees with a mean number of 13.3 advisees. Nearly three-fourths (74.0%) supervise doctoral dissertations with a mean number of 7.7 advisees.

A commonly applied measure of professorial productivity is publication frequency. Participants were asked to report publication activity for the five year period preceding the study. Table 2 summarizes their responses.

Table 2. Percentage of Respondents Reporting Publications for the Five Year Period Preceding the Study

Type of Publication	None	1-2	3-4	5-6	7 or more
Journal articles	20.9	24.3	21.5	13.0	20.4
Book chapters	45.2	36.1	11.9	3.4	3.4
Books and monographs	43.5	35.0	13.0	3.9	4.5
ERIC	61.0	20.4	8.0	4.5	6.2
Book reviews	51.4	24.9	13.0	5.1	5.7
Study guides	44.1	20.9	18.1	6.2	10.7

Job and Career Satisfaction

Participants were asked to select from a list and rank three sources of job satisfactions and dissatisfactions that best applied in their current situations. The most frequently cited sources of satisfaction were: working with students (selected by 70.1 percent of the respondents and ranked first, second, or third by 34.5 percent, 20.9 percent, and 14.7 percent, respectively), interesting and challenging work (selected by 39.6 percent and similarly ranked by 16.4, 11.9, and 11.3 percent), and opportunties for teaching (selected by 28.7 percent and similarly ranked by 9.0, 10.7, and 9.0 percent). The most frequently cited sources of dissatisfaction were: poor administrative support (selected by 37.3 percent and ranked first, second, or third by 9.6, 15.8, and 11.9 percent, respectively), inadequate resources (selected by 33.9 percent and similarly ranked by 14.7, 8.5, and 10.7 percent), ineffective administration (selected by 28.8 percent and similarly ranked by 14.1, 7.9, and 6.8 percent), and pressure to research and publish (selected by 26.0 percent and similarly ranked by 16.4, 5.1, and 4.5 percent).

Canadian and American professors differed in their responses to the question addressing sources of job satisfaction. The opportunity to engage in research and professional writing was ranked first by 37.5 percent of the Canadian respondents and by 7.2 percent of the American. The item was selected and ranked first, second, or third by 54.2 percent of the Canadians and by 22.2 percent of the Americans. Working with other faculty was selected and ranked first, second, or third as a source of job satisfaction by 20.9 percent of the Canadian respondents and by 6.7 percent of the American. Statistically significant differences were found between the responses of the two groups to these questions addressing research opportunities (p=.0001) and working with other faculty (p=.0002).

Participants were asked to check one of five terms that best described their present attitude toward their careers as professors of adult education. Nearly nine out of ten (87.5%) selected a term that indicated satisfaction--44.6% checked the very satisfied category and 42.9% the satisfied. Three percent (3.4%) of the respondents indicated that they were indifferent to their careers, 7.3% indicated that they were dissatisfied, and 1.1% indicated very dissatisfied. Asked if they would again choose professor of adult education as a career if they could remake the decision, 78.0 percent indicated that they would, 5.1 percent replied that they would not, and 15.3 percent were uncertain. Two percent (1.7%) did not respond to the question.

CONCLUSIONS

Preliminary analyses of the data gathered in this study suggest that:

1. Professors attach major importance to six factors in their decision to accept positions in adult education. The challenge of the job, the type of institution, the program, the faculty, geographical location, and the actual offer of the job are major attractants to positions. Professors attach lesser importance to type of student, the reputation of the institution, and the opportunity to do research and least importance to working conditions and salary package.
2. Teaching and activities related to teaching occupy the major portion of faculty members' time. Professors of adult education spend slightly over half of their job time in teaching and advising and only one-tenth of their time in research and scholarly activities.
3. Most professors of adult education find their careers satisfying. Nearly nine out of ten are satisfied with their careers with half of those being very satisfied and the other half being satisfied.
4. Most professors of adult education reaffirm their career choice. Seventy-eight percent would still choose to work as a professor of adult education were they to begin anew; 15 percent are uncertain.

REFERENCE LIST

1. Baldridge, V., Curtis, D., Ecker, G., and Riley, G. Policy Making and Effective Leadership: A National Study of Academic Management. San Francisco: Jossey-Bass Publisher, 1978.
2. Caplow, T., and McGee, R. The Academic Marketplace. New York: Basic Books, Inc., 1958.
3. Eckert, R., and Williams, E. College Faculty View Themselves and Their Jobs. Minneapolis: The University of Minnesota, 1972.
4. Ladd, E., and Lipset, M. "The Ladd-Lipset Survey." The Chronicle of Higher Education. Volumes 11, and 12, September 15, 1975, to November 24, 1975.
5. National Education Association. Higher Education Faculty: Characteristics and Opinions. Washington: National Education Association, 1979.
6. Stecklein, J., and Eckert, R. An Exploratory Study of Factors Influencing the Choice of College Teaching as a Career. Minneapolis: The University of Minnesota, 1958.
7. Willie, R., and Stecklein, J. "A Three Decade Comparison of College Faculty Characteristics, Satisfactions, Activities, and Attitudes." Research in Higher Education, AIR Forum Issue, 16:1, 81-93, 1982.

ALTERNATE

A STUDY OF THE RELATIONSHIP BETWEEN APL PERFORMANCE INDICATORS AND AGE COHORTS

Carol E. Kasworm
University of Texas at Austin

Rene Medina
University of Texas at Austin

INTRODUCTION

Is there a relationship between age and performance? Most research has considered cognitive and physiological constructs in investigating this question. In these studies, gerontological and adult development literature generally supports the model of stable performance with decreasing capabilities in the later years. Critics of these findings state that the research performance examinations of the older adult were often inappropriate. Results were biased because the research designs were not of relevant substance for the older age grouping, that there was biases reflected in the selection of the sample group and that the testing also examined speed of response as well as test construct performance (Botwinich, 1978; Knox, 1977).

No research has examined the relationship of age and performance to basic skills and knowledge of our society. The original APL national survey examined a cross section of the American adult population regarding their current level of performance on tasks identified as basic requirement of adult life. The instrument and data collection procedures represents 1) performance indicators which are purported to represent basic skills and knowledge of life survival in our American society (thus of relevancy to all age groupings), 2) the interview was a non-timed data collection procedure and 3) the sample reflected a national cross-section representative of American adults.

This study examined the performance of age cohorts representing a cross-section of the national American adult population of the APL data base; full and restricted models were developed which examined age cohort relationship to performance on the nine APL subscores. This statistical procedure provided control for key socio demographic influences such as educational level, income level and race.

BACKGROUND

During the past decade, the Adult Performance Level (APL) program has held a highly controversial place within adult education research. Originally funded by USOE, the project goals included: 1) a systematic, empirically-based definition of adult functional literacy (competence), 2) a framework of competency level performance which defined designated outcomes for adult basic life coping performance and 3) a curriculum for adult basic education which would instruct and validate functional literacy (competency) undereducated adults. The APL program had five major components to its operation. They included: 1) the determination of basic requirements of adult living (accomplished through literature review, expert judgements, practitioners and undereducated adults' perspectives); 2) the development of an instrument of performance indicators related to the basic requirements of adult living; 3) a national survey to collect data in relation to these performance indicators; 4) examination of survey data with subsequent reanalysis and designation of functional competency levels which represented "levels of functional competency of adults in relation to educational and economic success"; and 5) development of curriculum for adult basic education, as well as for a competency-based high school diploma program (Lyle, 1977; Northcutt, 1975).

Griffith & Cervero (1977) have raised serious issues regarding the theoretical and technical design of the APL program. They specifically debated its philosophical supports and empirical validity in relation to a designated curriculum for adult undereducated learners. In a later report, Cervero (1980) also examined the concurrent and construct validity and the reliability of the test as an accurate measurement of functional competency. In his conclusion, he reports "the Texas APL test is a reasonably valid measure of those skills--verbal ability, writing and computation--which are considered major outcomes of a basic education curriculum but not a valid measure of the functional competency of American adults." (p. 164). It is apparent from Cervero and Griffith's & Cervero's analyses that major flaws in the research design and analysis occurred with the designation of minimum competency levels linked with educational and economic success, the further elaboration of these criterion levels as a valid measure of functional competence and the curriculum competency model based on these construct measures.

This secondary analysis examined the raw score data of performance indicators of a cross-sectional sample of American adult population in relation to age cohorts. This study did not assume the test measured functional competency nor that the competency levels of APL1, APL2, and APL3 were valid and reliable. Rather, this research made the assumption that a portion of basic knowledge and skill areas for American adult living were defined by the study; that the APL instrument provided a descriptive survey instrument of these specific designated areas with reliability and content validity; and that the data collection procedures were appropriate.

METHODOLOGY

This study investigated the performance of age cohorts groupings in relation to nine skill and knowledge areas, as identified by the original APL study. These nine areas incorporated into a 67 item test included: Skill areas: reading, writing, computation, problem solving and Knowledge areas: occupational knowledge, consumer economics, health, community resources, government and law.

The Opinion Research Corporation conducted the national APL survey in October, 1974. The national survey interviews was administered to a stratified sample selected to represent the American population. Specific sampling procedures, data collection protocals and other pertinent data is noted in the Final Report (Cervero, 1980; Lyle, 1977). For the national survey sample, five independent samples were drawn, each with a size of not less than 1,500. The total sample represented approximately 8,400 weighted number sample respondents.

In this secondary analysis, the study of the national survey examined age cohort groupings according to six age groupings: 18-20 years, Group 1; 21-29 years, Group 2; 30-39 years, Group 3; 40-49 years, Group 4; 50-59 years, Group 5; 60-65 years, Group 6.

Multiple regression least squares method of linear models, as presented by Ward and Jennings, was the statistical procedures used in the analysis (1973). This method develops models to fit the data; full models presumed no restrictions. Restricted models assumed a relationship among the variables, testing for significant differences in the error sum of squares to determine acceptance or rejection of the restricted models.

This research investigation examined the relationship between age cohorts and each of the skill and knowledge performance variables of the two data sets. In both the full and restricted models, the assumption was made that there would be no differences by age according to each of the performance subscore variables. In the restricted models, each of the knowledge and skill variables were analyzed independently in a predictive model, controlling for education, race, sex, family income, and urbanicity. Null hypotheses for each of these performance variables assumed no differences for age cohorts.

RESULTS

In each of the restricted model analyses of the national survey, significant differences were found through the age range (Group 1 to 6) on each of the subscore performance variables. The findings for each performance variables will be presented in a restricted analyses controlling for education, race, sex, family income, and urbanicity. All F's were listed at 1 to 5 and 7968. The study used .05 as a criterion point for level of significance in all analyses.

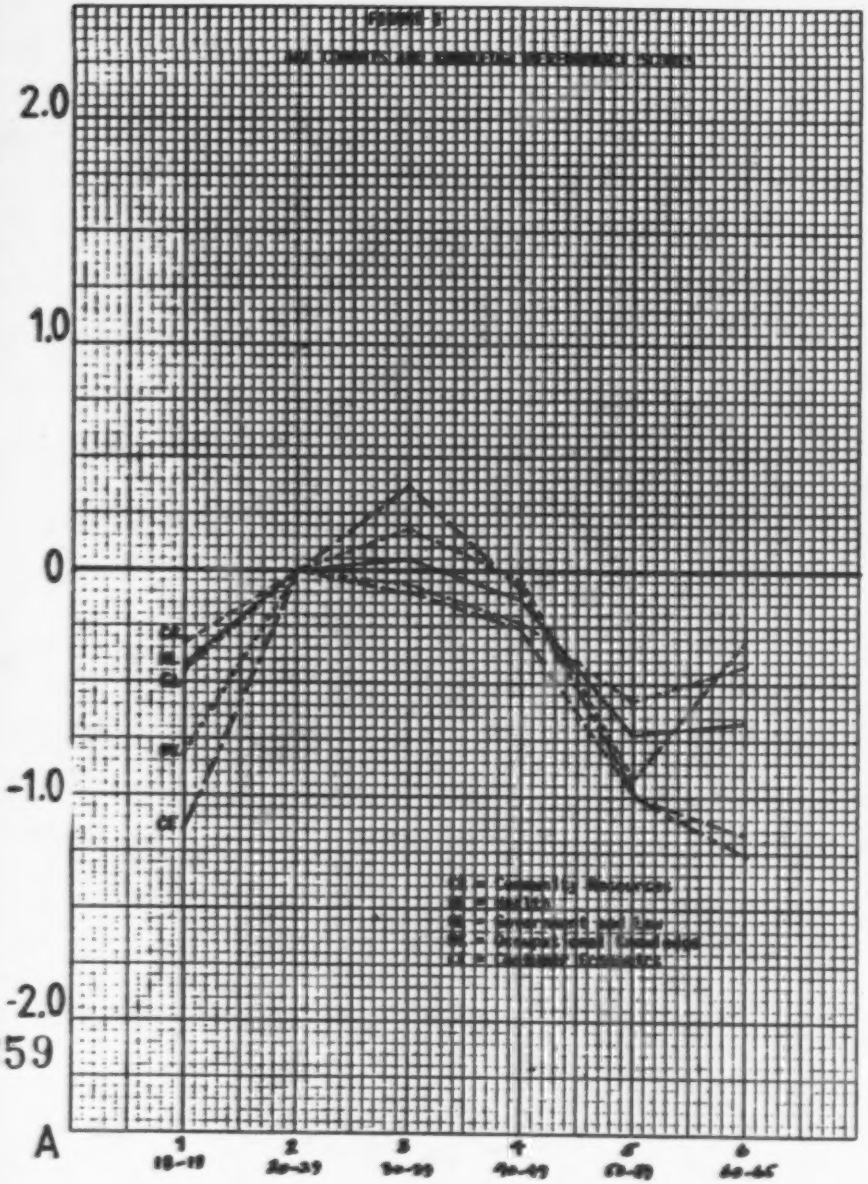
Reading Skill performance subscore. In age groups 1 and 2 and age groups 3 and 4, there were no significant differences ($a_1 = a_2$, $a_3 = a_4$). Group 5 and 6 have significantly lower performance scores, and there were significant differences between age groups 5 and 6.

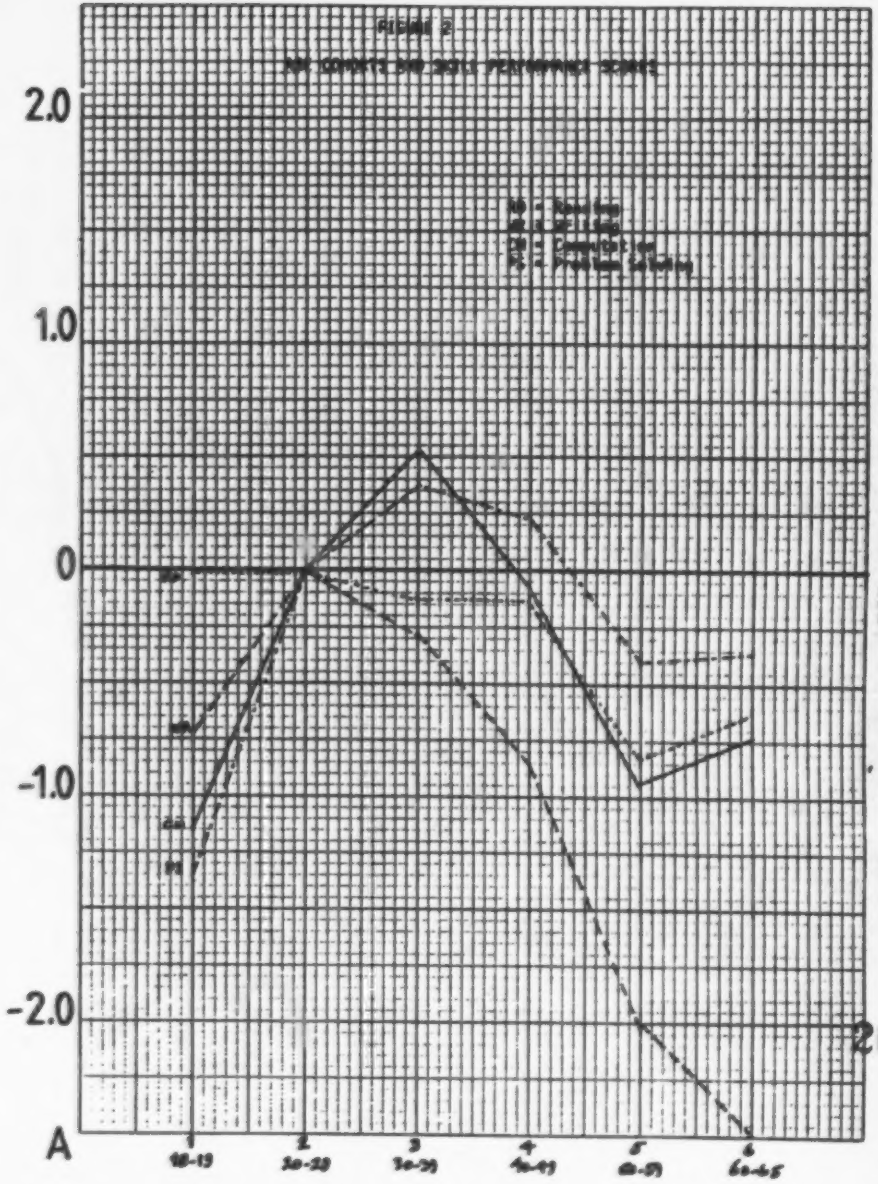
Writing Skill performance subscore. There were significant differences among all the age groups. Age group 1 (18-20 years) had a lower score than Groups 2,3, and 4. Group 5 & 6 (50 and above) had no intra-group significant differences, but displayed inter-group significant differences.

Computation Skill performance subscore. This skill area exhibited a different pattern. Age group 1(18-20 years) had a significantly lower performance score in relation to Groups 2,3, and 4,but no significant differences between Group 2 to 4. Group 3 (40-49 years) have a significantly higher performance. There were significant differences between Group 4 and Groups 5 & 6. Group 5 & 6 had a significantly lower performance than all age cohorts.

Problem-solving Skill performance subscore. Age group 1 is significantly lower than age Group 2,and age Group 2 is significantly lower than age Group 3. There is no significantly between age Group 3 and Group 4. Group 5 and 6 were significantly lower than age Group 3 and Group 4. There were no significant differences between age Group 5 and Group 6. Age group 1 was significantly lower than the other age groupings.

BEST COPY AVAILABLE





Knowledge performance subscore = Consumer Economics. There was a significant increase from age Group 1 to 2. Group 1 and 2 were significantly lower than age Group 3. From age Group 3 to age Group 6 we postulated and accepted that their performance would decrease by a constant.

Knowledge performance subscore = Health. Age Groups 2, 3, and 4 were found to not be significantly different in test scores. Groups 5 and 6 were found to be significantly different in test scores. Age Group 1 scored significantly lower than age Group 2,3, & 4, and significantly higher than age Group 5 & 6.

Knowledge performance subscores = Community Resources & Government and Law. These two performance subscores exhibited similar patterns. There were significant differences in the age groups with the exception that age Group 2 and 3 were not significantly different.

Knowledge performance subscore = Occupational Knowledge. Age Groups 2,3, and 4 were found to be without significant differences. Age group 1 had a significantly lower score from age Groups 2,3, & 4. Age Group 5 performance scores were significantly lower from age Group 1. Age Group 6 had a significantly higher score than age group 1 and 5.

CONCLUSIONS

In examining the relationship between age cohorts and certain APL performance indicators of basic skills, age groupings of 18 to 20 years and 50 to 65 years tend to exhibit lower scores than 21 to 49 year age groupings. Writing performance, in particular, exhibts significant decrement with increasing age. These findings suggest that in examining relationships between age cohorts and APL life skills performance indicators that in general age groupings 21 to 29 years perform better. In controlling significant influences of education, race, family income, sex and urbanicity that the 50 and above age sample exhibited lower performance scores than the 21 year old and above. However, the older groups reported higher or similar scores to the 18 to 20 year old group in computation and problem solving skill areas and consumer economics, and government and law knowledge areas.

As with any cross-sectional life span survey, these findings may represent generational effects. However, due to the parabolic curves of the models, typical generational impact is not a sufficient generalization. These findings, in general, suggest lower performance in life coping knowledge and skill areas as defined by the APL test in the youngest adult and oldest adult categories.

REFERENCES

Botwinick, J. *Aging and Behavior* (Second Edition). New York: Springer Publishing, 1978.

Cervero, R. M. Does the Texas Adult Performance Level Test Measure functional Competence? *Adult Education.* 1980, *30* (3), 152-165.

Griffith, W. D. & Cervero, R. M. The Adult Performance Level Program: A serious and deliberate examination. Adult Education. 1977, *27* (4), 209-224.

Lyle, B. *Final Report: The Adult Performance Level Study*. Austin, Tx: University of Texas at Austin, August, 1977.

Knox, A. *Adult Developmental Learning*. San Francisco: Jossey-Bass, 1977.

Northcutt, N., *et.al.* *Adult functional competency: A Summary*. Austin, Tx: Industrial and Business Training Bureau, The University of Texas, March, 1975.

Ward, J. H. & Jennings, E. *Introduction to Linear Models*. Englewood Cliffs, N.J.: Prentice Hall, 1973.

SYMPOSIUM

"Gender, Knowledge and Power in Adult Education: A Participatory Research Project"

I. VIGNETTES

* The official listens sympathetically. But before he would answer any of my questions, he wished to ask a few of his own:

> "How long have you been at the University of Hawaii?" he asked.
>
> "Four years."
>
> "How old are you?" he asked.
>
> "Thirty-eight."
>
> "What rank were you when you were hired?" he asked.
>
> "Instructor."
>
> "What rank are you now?" he asked.
>
> "Instructor . . . "
>
> "Don't you think that, at 38, and after four years, you are still an instructor is an indication that you are not qualified for either tenure or promotion? Now perhaps if you had been promoted . . . "

I was complaining of sex discrimination. The very term, if it has any meaning, means that qualified women are bypassed in favor of less qualified men.

* At the Commission of Professors meeting in San Antonio, two women graduate students approached two women faculty members who had been involved in a presentation on "Assisting Graduate Students with Their Dissertation Research."

> "We have an all male faculty and one or two of us women want to go into the professoriate. But, we feel we are not encouraged to do so in the same way male students are."
>
> "And that's not all, not only do the male faculty not appear to have high expectations for our intellectual abilities, but we get sexual messages . . . both overt and covert."
>
> "How do we get women faculty with whom we can identify and who will see us as people?"

* Jane, who had completed all work on her doctoral degree but her dissertation, approached her female dissertation director to inform her she was dropping out of the doctoral program. After probing her student's stated reason -- "Since having the baby, I just can't get into my topic.

Mary Elaine Kiener, Assistant Professor
Department of Nursing, Ball State University
Muncie, Indiana 47306

I don't think the research is that important." -- the advisor discovered that the student had never been excited about her topic. When the advisor asked why the student had chosen to study continuing professional education, the student replied that she had not felt that her compelling intellectual interest would be acceptable for a dissertation. Jane is currently doing her dissertation research on, "From Androgenous Coupling to Androgenous Parenting," a primary concern of hers and one which ignites her interest and motivation.

* A male professor of adult education writes, "Over the last three years, I have taught 13 courses in a graduate program in adult education. There have been varying ratios of men to women in ten of these courses and all women in three courses. While every course is profoundly affected by the individuals involved, the three courses with all women were, for me, and, I believe, the participants involved, a qualitatively different experience from others. While I made this assessment on a personal basis during each course, the same opinions were voiced without my prompting by the women in each of the three courses.

"The two major differences were that the women in these courses voiced their points of view much more freely than the women in the other ten courses. Also, the bonding which occurs among participants and myself occurred much earlier and with more intensity than in the other courses. As a result these three courses have been among the most enjoyable and successful ones I've ever pariticpated in. While not true of all women, it has been my observation that men generally inhibit the intellectual interchange by women in graduate education."

* Doris, 29, married, the mother of three children, came to her class at the adult community center high school regularly and never missed a class. Classes began in the late afternoon and ended at 9:30 pm, and she came by public transportation, waiting on dark corners after the classes.

"Sure, it's dangerous, and I don't like standing there, but what's my choice? Home with my kids, not even a high school diploma. I'm a woman, I'm black, and there's no job nowhere. I had to come back to school. How can I get anywhere without at least a high school diploma?"

One day Doris arrived wearing sunglasses out of season in the February weather, but the glasses did cover her two black eyes that her husband had given her in an angry fight against her going back to school. Doris continued, considering her marriage on the rocks. She earned her high school diploma, and she found a job.

Many other women students in the same program lived in public housing, and not only risk nightly bus and subway rides, but ventured into a violent "no man's land" every time they re-entered "the Projects" alone after dark. "Of course I carry a little gun in my purse, honey. What else could I show those fools?"

II. CONTEXT AND THEMES

Are adult educators "sex fair?" Are they "race fair?" We raise issues of gender in adult education in a context of general questions of fairness and equality. We are not claiming that sexual politics are the only significant dividing factor among adult educators. We know that racial discrimination is an even more powerful bias in our institutions and attitudes. Further, the field by and large serves educational consumers in the middle class. While the mysteries of "participation" are often a focus of research questions, a common but ignored "finding" is that less-educated, working class, and minority people tend not to participate in the social institutions being investigated.

It is in women's lives -- in love relationships, in the family, children, in schools and other social institutions, and at work -- as they meet social pressures, expectations, and rewards that they experience the structures of inequality, oppression, and discrimination. In being undervalued, passed over, abused, or taken lightly, women form a second-class view of themselves. They experience a restriction from public to private spheres, where their power and control may be tolerated. They may experience a trade-off of expression in one area for silence in others. Experiences shape consciousness, and as women's consciousness expands to include awareness of the biases and structures of inequality in their daily life they can act to change those conditions. Research is one way that women in educational settings can both expand consciousness and work to change the conditions. Women in social movements likewise can use research to strengthen their social actions.

"The contradictory existential and ideological condition of women scholars must become the starting point for a new methodological approach. The postulate of objectivity itself makes it necessary that those areas of the female existence which so far were repressed and socially 'invisible' be brought into the full daylight of scientific analysis. In order to make this possible, feminist women must deliberately and courageously integrate their repressed, unconscious female subjectivity, i.e., their own experience of oppression and discrimination into the research process. This means that committed women social scientists must learn to understand their own 'double consciousness' as a methodological and political opportunity and not as an obstacle. Leavitt et al wrote about his double consciousness which women have in common with other groups who have suffered from oppression: 'members of subordinated groups must, if they are to survive, develop to those who control them, at the same time as they are fully aware of the everyday reality of their oppression, a quality the superordinate groups lack'" (Leavitt, Sykes, Weatherford, 1974, p. 112).[2]

The purpose of this session is to examine the blinders which adult educators commonly wear and to look at how gender, race and class biases affect our work. A social system is busy reproducing itself. If gender, race and class biases permeate our field -- as we form research questions, as we treat students or defer to professors, as we decide what is knowledge -- then we are perpetuating those social biases at both the insitutional and personal level. This conference is a microcosm of how the field works. Our social patterns here, the rituals and symbols of the conference, reproduce existing power relations of dominance and deference, exclusion and inclusion.

III. METHODOLOGY

We have raised these issues in a research context of the participatory research model because it is an approach which critiques and challenges traditional power assumptions and relations in academic research. Through the use of alternative methods, participatory research puts the production of knowledge back into the hands of the people. Rather than pretending to be neutral and value-free, this type of research implies that social change will occur as a result of the research endeavor. Most effective participatory research endeavors include three inter-related components:

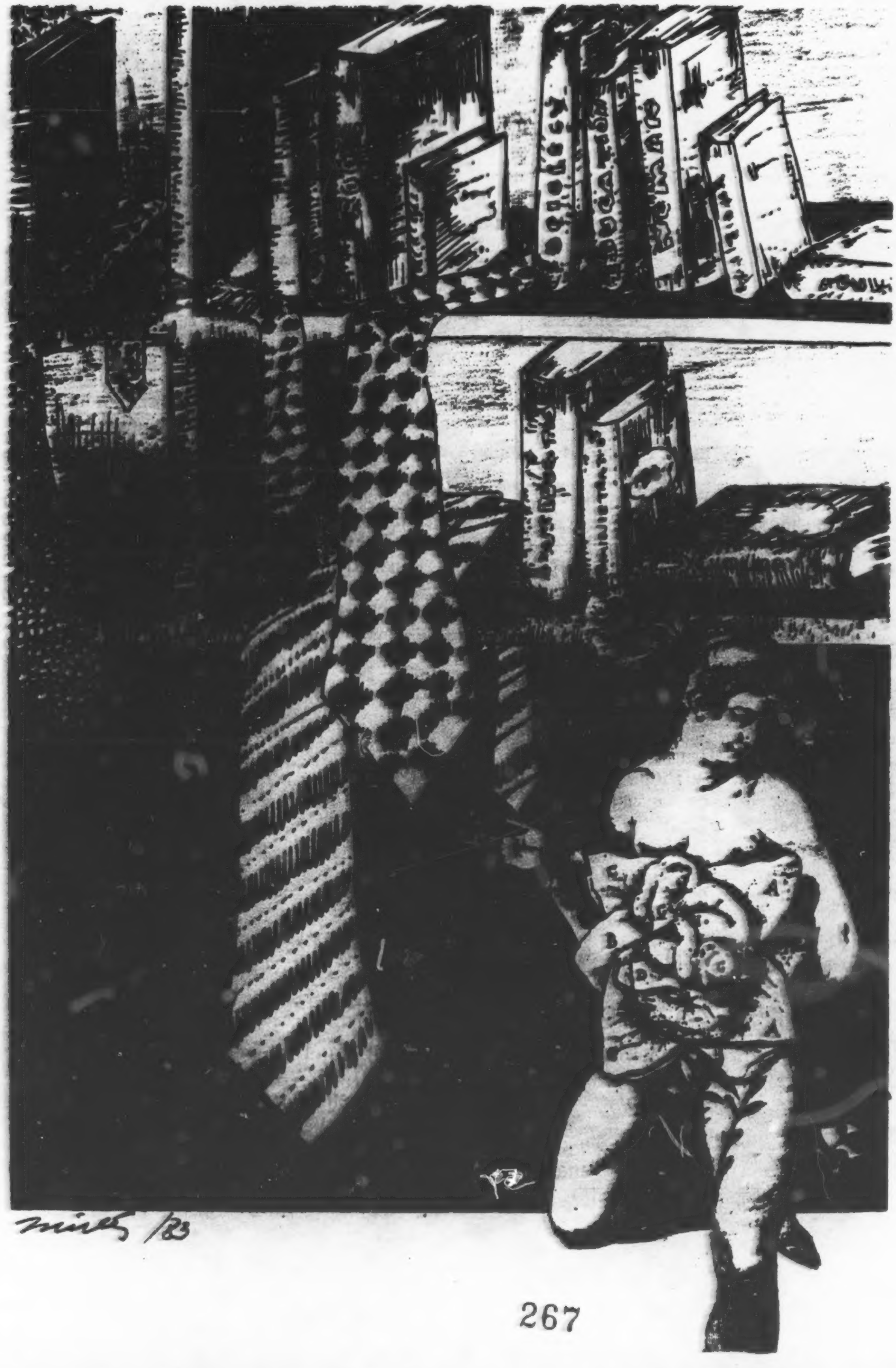
1) A process of investigation into social problems and issues with the full and active participation of the community in the entire process.
2) An educational process, in which the community develops an awareness not only of the concrete problems it faces but of the structural causes (socio-economic, political, cultural) of the problems.
3) A process of taking action that leads toward long-term as well as short-term solutions to the problems.

With the use of a participatory research framework, in this symposium we shall divide into small groups to 1) discuss from our concrete social experiences at the conference and at home how the biases of gender, race and class operate, and 2) discuss how we might change those patterns.

FOOTNOTES

1. Abramson, Joan. The Invisible Woman: Discrimination in the Academic Profession.

2. Mies, Marie. "Towards a Methodology for Feminist Research," in Gloria Bowles and Renate Duelli-Klein, ed., Theories of Women's Studies II. Berkeley: University of California.


SOCIOLOGY
EDUCATION
/83

SUGGESTED READINGS

"Gender, Knowledge and Power"

Beauvoir, Simone de. The Second Sex. New York: Knopf, 1952.
Classic history of women's oppression in western civilization. Needs companions as corrective for the omission of women in the Third World.

Bernard, Jessie. The Female World. New York: McMillan, 1981.
Sociological analysis of the world and system in which women live from a feminist viewpoint.

Gilligan, Carol. In a Different Voice. Cambridge: Harvard University Press, 1982.
Critiques developmental theories, especially moral development as they do/do not apply to women.

Hall, Budd L. "Participatory Research: an Approach for Change." Convergence, 1975, 8 (2), 24-32.
Offers an alternative approach to adult education research.

Miller, Jean Baker. Towards a New Psychology of Women. Boston: Beacon Press, 1976.
Analyzes social characteristics of women that have been traditionally considered weaknesses as strengths -- like affiliation, emotionality, sense of pain -- and urges women to accept conflict and to deal with power.

Mies, Maria. "Towards a Methrdology for Feminist Research," in Gloria Bowles and Renate Duelli-Klein, ed. Theories of Women's Studies II. Berkeley: University of California.
Outlines methodological guidelines for feminist research which are similar to those for the participatory research model.

Moraga, Cherrie and Gloria Angeldua. This Bridge Called My Back, Writings by Radical Women of Color. Watertown, Mass: Persephone Press, 1981.
Eloquent expression in many forms of the oppression of women of color, addressing the racism of white women yet affiliating with them. Contains an open letter to Mary Daly for the racial exclusiveness in her GYN/Ecology.

Rowbotham, Sheila. Women's Consciousness, Man's World. Baltimore, Md: Penguin Books, 1974.
Short historic overview of structures in capitalist society that perpetuate ideologies and practices of patriarchy.

Schaef, Ann Wilson. Women's Reality: An Emerging Female System in the White Male Society. Oak Grove, NJ: Winston Press, 1981.
The purpose of this book is to provide an understanding of what it means to be a female in our culture with the goal of facilitating communication and opening the door to a mutual understanding between men and women.

Walker, Alice. Color Purple. New York: Harcourt, Brace, Javonovich, 1982.
A novel with a penetrating analysis of racial and gender discrimination; an unusual and hopeful note on female bonding.

THE USE OF ETHNOGRAPHY, CASE STUDY, AND GROUNDED THEORY IN ADULT EDUCATION RESEARCH

Chair: Sharan B. Merriam*
Presentors: Harold Beder, Rutgers University
Merrill Ewert, MAP International
Sharan Merriam, N.I.U.
Moderator: Edward V. Jones, George Mason University

Within the last several years there has been a growing interest in qualitative research methodologies. Ethnography, case study, and grounded theory have proved particularly useful for bringing some conceptual clarity to previously unexplored areas of practice. Ethnography has a long history as the methodology used by anthropologists to study peoples and their cultures. Case study is probably the most familiar of the three methodologies, having long been used in medicine, law, social work, business, and psychology. Basically, the case study is an intensive description and analysis of a phenomenon or social unit such as an individual, group, institution, or community. Grounded theory is a methodology developed by sociologists Glaser and Strauss (1967) and has as its major purpose the building of theory. Each of these methodologies has some common characteristics that permit grouping them together.

Common Characteristics of Ethnography, Case Study, and Grounded Theory

Philosophical assumptions underlying these approaches include the beliefs that human behavior is integrally related to the context in which it occurs, and that this behavior cannot be understood without knowing its meaning for the participants. Such assumptions determine the ways in which data are collected and analyzed. To begin with, the primary instrument for data collection and analysis is the researcher. While other instruments such as surveys, tests, or inventories might be used for support, the human investigator possesses several characteristics (responsiveness, adaptability, etc. - see Guba and Lincoln, 1981) that can lead to understanding behavior as it occurs in its natural setting.

A second characteristic that the three methodologies have in common is that each usually involves field work. That is, the researcher physically goes to the site, the group of people, the institution, "the field" to collect data. It is always the case in anthropological studies where the intent is to learn about people of different cultures. And in most instances, investigations that build theory (grounded theory) or describe and interpret a social process or unit (case study) necessitate field work. Field work involves becoming intimately familiar, through observation and interviews, with the phenomenon under study, whether it be a case investigation of a single individual or a grounded-theory study of a complex social interaction. Occasionally case studies and grounded theory studies have been conducted using written documents alone, but these are exceptions.

The third factor common to ethnography, case study, and ground theory research is that each methodology leads to an increased understanding of the phenomenon by clarifying concepts, generating hypotheses, or constructing explanatory frameworks. These methodologies are, in fact, particularly appropriate to use where there is little knowledge about the problem. If there is a lack of theory, or if existing theory does not adequately explain the phenomenon, hypotheses cannot be used to structure an investigation. Rather, the researcher, using himself or herself as the primary instrument, goes into the field and studies as much of the problem as possible with the intent of interpreting, explaining, hypothesizing, or theorizing about the phenomenon.

---

*Northern Illinois University, 101 Gabel Hall, DeKalb, Illinois - 60115

Ethnography

Ethnography is the research methodology developed by anthropologists to study human society and culture. The term itself has two distinct meanings. Ethnography is (1) a set of methods or techniques used to collect data, and (2) the written record that is the product of using ethnographic techniques.

Ethnographic techniques are the methods researchers use to uncover the social order and meaning a setting or situation has for the people actually participating in it. The five procedures commonly used in this type of investigation are participant observation, in-depth interviewing, life history, documentary analysis, and investigator diaries (records of the researcher's experiences and impressions). Employing any one of these procedures involves going into the field, "immersing oneself in a collective way of life for the purpose of gaining firsthand knowledge about some facet of it" (Shaffir, et al., 1980, p. 6). The archetypical anthropologist that comes to mind is one who travels to exotic places, lives with the people for a period of time, and returns home to write an account of their cultural norms and social practices. Not all ethnographic researchers travel to foreign places, however. Much fieldwork has been conducted with particular social groups within the ethnographer's own society. In the United States, ethnographic studies have been published on many segments of society including ghetto dwellers, coal miners, and suburban housewives.

The techniques of ethnography--participant observation and interviewing in particular--have been adopted by people in applied fields such as adult education where research problems or questions have warranted an exploratory approach. However, anthropologists take issue with educators and others who use ethnographic techniques and then think that they are doing ethnography. For ethnography is also an account of the data, an account that interprets the data within a sociocultural framework. Ethnography has as its intent the interpretation of a situation that incorporates the participants' symbolic meanings and ongoing patterns of social interaction. Wolcott (1980) makes this distinction between technique and account:

> Specific ethnographic techniques are freely available to any researcher who wants to approach a problem or setting descriptively. It is the essential anthropological concern for cultural context that distinguishes ethnographic method from fieldwork techniques and makes genuine ethnography distinct from other 'on-site-observer' approaches. And when cultural interpretation is the goal, the ethnographer must be thinking like an anthropologist, not just looking like one. (p.59).

Many of the same techniques of ethnography are used in case studies and grounded theory studies. Case study and grounded theory approaches do not have as a major focus sociocultural interpretation, and so are even more useful to adult educators who wish to conduct exploratory research.

Case Study

A case study is an intensive description and analysis of some phenomenon or social unit in its context. It analyzes an individual, group, community, or institution, with an emphasis upon unity within a bonded system. It is a method of organizing data for the purpose of analyzing the life of a social unit.

Some have confused case studies with a type of evidence (i.e., quantitative or qualitative) or a method of research (i.e., ethnographic). It is neither. (Some case studies reported in the literature have made more extensive use of quantitative than qualitative data. Other researchers have applied ethnographic tools in ways that would not come under the rubric of case study research.) In essence, a case study is a research strategy that attempts to examine contemporary phenomena in a real-life context, particularly when the boundaries between the phenomenon and the context are not clearly evident (Yin, 1981).

Some educators of adults have embraced the case study for pedagogical or problem solving purposes; however its potential contribution as a serious research strategy has not yet been realized. Unlike experiments that deliberately divorce a phenomenon from its context to focus attention upon a few selected variables, case studies are holistic, attempting to capture the totality of the phenomenon (Yin, 1981b). They provide a mechanism by which the complexity of a dynamic system can be analyzed as a whole and generalizations propounded.

The research process involves several steps beginning with the purposeful selection of a case (a particular person, a site, program, process, community or other social unit) that is of interest to the researcher (Merriam and Simpson, 1983). Then, although case studies are frequently exploratory, a conceptual framework or organizing principle around which data will be gathered must be developed. These data are usually derived from personal documents, life histories, interviews, organizational records and observations although other sources may be used as well.

At the next stage, the data are aggregated, organized, or classified into manageable units and developed into some chronological, categorical, typological or theoretical construct that leads to generalization (Merriam and Simpson, 1983). The conceptual framework determines which events are meaningful and should therefore be recorded and analyzed. Most case study researchers tend to gather too much data and base their analyses upon categories that are too numerous.

The analysis itself is based upon an accurate rendition of the facts of the case followed by various explanations of these facts. A single explanation is then chosen that appears most congruent with the facts. Analysis moves the case study process beyond story-telling and makes it a viable research strategy capable of generating explanations as well as descriptions.

Two types of case studies have been used in adult education. The first is the within-case design which looks intensively at a single situation with the intent of examining the relationship of multiple variables within a bounded system. The second is cross-case designs that synthesize the lessons learned from a number of cases for the purpose of developing more generalized explanations. This also provides the basis for replicating other studies or confirming the findings but assumes that a sufficient number of within-case reports are available.

Case studies might be considered an antidote to the findings of "no significant difference" that characterize much of educational research. They also provide useful insights regarding the educational process that can both provide immediate answers to problems of implementation and lead to generalizations regarding the nature of adult and continuing education. It lends itself to the analysis of complex social phenomena where causes and outcomes interact in a variety of ways and where single factor theories oversimplify reality. This approach also provides a mechanism through which research problems can be reconceptualized in response to the data, thus dropping meaningless questions while taking into account new information that has been gathered.

Case studies have several significant limitations. First, they tend to be time-consuming and expensive since they usually presuppose field research. Second, researchers schooled in quantitative methods frequently require more training and experience in observation, interviewing techniques and documentary analysis before embarking on this kind of study. Some researchers using this approach have mistakenly assumed that no conceptual framework is necessary and so have approached their problems intuitively, finding the data to support their predilections. The result is art, not science.

A third limitation of this research strategy is that one may gather volumes of data to document the obvious while at the same time, missing the truly significant. Graham and Hoke examined more than 100 case reports and found that many were piecemeal aggregates of information without coherent format or pattern, lacking critical information necessary for replicability and transferability of the problem (1977). These reports were found to be "product-centered" with little information regarding the decisions that were made and the constraints affecting the programs being analyzed. Finally, many case study narratives also tend to be lengthy and therefore left unread by those very policy-makers intended as the primary audience.

Although case studies have some inherent limitations particularly as they relate to the difficulty of developing generalized explanations, it is important to assess the case study -- regardless of the type of methodology used or the nature of evidence produced -- as a viable strategy for legitimate research in the field of adult education.

Grounded Theory

Grounded theory is particularly suited to investigating problems for which little theory has been developed. Grounded theory is a methodology, and a methodology is a theoretical construct for collecting and interpreting data. At the heart of a methodology is a set of epistemological assumptions concerning the nature of truth and ways of knowing it. These assumptions are crucial, for the very purpose of a methodology is to guide us in determining the truth -- however it be defined.

Grounded theory assumes that the purpose of theory is to promote understanding and that understanding can only be achieved through the researcher's emersion in data experienced in context. Through emersion the researcher inductively "derives" relationships which are then cross-checked and refined through the constant comparative method. The theory which results is thereby grounded in data. Rather than beginning with theory, deriving propositions from that theory, testing them, and subsequently adding to or refining the original theory, grounded theorists begin with a phenomenon or "situation" and a set of data.

Data collection is guided by theoretical sampling in which "the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges" (Glaser and Strauss, 1967, p. 45). An initial sample is chosen by its logical relevance to the research problem. In the first stage of data collection one compares incidents, generates tentative categories and/or properties to cover the incidents, and codes each incident into as many tentative categories as are appropriate. In the second stage the comparison of units changes from "incident with incident" to the comparison of "incident with properties of the categories" (p. 108). The researcher attempts to integrate categories and their properties.

The third stage is characterized by the delimitation of the theory. Here, similar categories are reduced to a smaller number of highly conceptual categories; hypotheses are generated; data are further checked for their "fit" into the overall framework. The simultaneous collection and analysis of data ends when the categories become saturated. Saturation means that "no additional data are being found whereby the researcher can develop properties of a category" (Glaser and Strauss, 1967, p. 61). The final stage -- the actual writing of the theory from coded data and memos -- occurs when "the researcher is convinced that his analytic framework forms a systematic substantive theory, that it is a reasonably accurate statement of the matters studied, and that it is couched in a form that others going into the same field could use" (p. 113).

Grounded theory is a particularly useful methodology for studying phenomena about which little is known, for a substantial body of previously established theory is not requisite. This makes it especially useful in fields such as adult education that are still developing a theoretical base. Furthermore, done correctly, grounded theory is highly sensitizing; it has the ring of reality which is a product of its grounded nature.

This methodology is not without its weaknesses, however. Grounded theory is as much art as it is science. The researcher's creativity and powers of expression play major roles in success. Discovery, or the process of arriving at an insight that may later form a category or property in the theory, is not a process that can be mapped out for other researchers to follow. Only the tools that may facilitate discovery can be given to the researcher. The investigator remains central to this type of research. Furthermore, grounded theorists are generally left with two questions posed by a research establishment dominated by logical positivism. How does one know the theory is true, and to what extent is it true? Frequently, there are no answers which suffice.

In summary, ethnography, grounded theory, and case study are three approaches a researcher might consider using to gain a better understanding of adult education practice. Prominent studies (see, for example, Mezirow, et al., 1975; Clark, 1958) have already demonstrated the potential these methodologies hold for contributing to the knowledge base of our field.

References

Clark, Burton. *Adult Education in Transition*. Berkeley, Calif.: University of California Press, 1958.

Glaser, Barney G. and Strauss, Anselm L. *The Discovery of Grounded Theory*. Chicago: Aldine Publishing Company, 1967.

Graham, Kathleen, and Hoke, Stephen. "Designing Case Studies That Make a Difference." *Inntech Journal*, Vol. 1, No. 1, 1977.

Guba, Egon G. and Lincoln, Yvonna S. *Effective Evaluation*. San Francisco: Jossey-Bass, 1981.

Merriam, Sharan and Simpson, Edwin. *A Guide to Research for Educators and Trainers of Adults*. Chicago: Follett Publishing Company, 1983 anticipated publication date.

Mezirow, Jack, Darkenwald, Gordon, and Knox, Alan. *Last Gamble on Education*. Washington, D.C.: Adult Education Association of the USA, 1975.

Shaffir, William B., Stebbins, Robert A., Turowetz, Allan. *Fieldwork Experience*. New York: St. Martin's Press, 1980.

Wolcott, Harry F. "How to Look Like an Anthropologist Without Really Being One." *Practicing Anthropology*, 3 (1), 1980.

Yin, Robert K. "The Case Study Crisis: Some Answers." *Administrative Science Quarterly*, Vol. 26, March 1981a, 58-65.

Yin, Robert K. "The Case Study as a Serious Research Strategy." *Knowledge: Creation, Diffusion, Utilization*. Vol. 3, No. 1, September 1981b, 97-114.

SYMPOSIUM

HUMAN RESOURCE DEVELOPMENT - MODELS FOR DECISION-MAKING BY WORKERS, MANAGEMENT, AND GOVERNMENT

John A. Niemi, Chair*
Northern Illinois University

James Houlihan
Northern Illinois University

Dennis Dicks
Concordia University

James R. Memmott
Northern Illinois University

Power and conflict between workers and management have long presented major concerns to North American organizations. As far back as 1925, Mary Parker Follett was suggesting three ways to deal with conflict: domination, compromise, and integration. It was her belief that the most dynamic and promising solution was integration, for it involves invention in place of limiting a decision to an exclusive solution. The result may be the uncovering of a new solution which is superior and satifsying to all concerned (Metcalf and Urwick, 1940). Thirty-five years later, Douglas McGregor (1960) published The Human Side of Enterprise, which described two polarized theories of management: Theory X, assumptions by management that people are lazy, irresponsible, and need constantly to be watched; and Theory Y, assumptions by management that people are hard-working, responsible, and need only to be supported and encouraged.

The purpose of Theory Y was to promote integration of individual and organizational goals. Chris Argyris described this integration as a fusion of goals (Argyris, 1964).

In 1981 William Ouchi published Theory Z. According to him:

> ...the Type Z organization comes close to realizing that ideal. It is a consent culture, a community of equals who cooperate with one another to reach common goals. Rather than relying exclusively upon hierarchy and monitoring to direct behavior, it relies also upon commitment and trust. (page 70)

This emerging concept of participative decision-making is gaining increasing attention in North America.

What lessons can North Americans learn from the Japanese experience? What insights might human resource developers derive from successful American studies? Are there other models having a different genesis? What are the implications of these models for service organizations? How can human resource developers create training programs to enable workers and managers to function in a collaborative, instead of an adversary mode?

---

*Graduate Studies in Adult and Continuing Education, 101 Gabel Hall, Northern Illinois University, DeKalb, Illinois - 60115.

A case can be made that Japanese society encourages private and social investment in both formal and informal education and its subsequent transformation into job-related skills. Furthermore, a participative strategy adopted in Japan emphasizes cultivation of a skill as an attribute of a group, rather than of an individual, thus addressing an important, but often neglected aspect of human capital formation.

The lessons for North Americans include the following:

1. The broadest generalization is that Japanese employment practices form a coherent system whose psychological, social, political, economic, technical, and cultural features are relatively well integrated and centripetal. Canadian practices are not well integrated and are centrifugal.

2. The Japanese system has evolved away from the American or Canadian notion that work skills are commodities to be traded on the open market, and toward the notion that skills are embodied in the organized working group.

3. Accordingly, the Japanese systematically develop and deploy work skills by selecting school graduates for long-term potential and then realizing this potential through job rotation and training.

4. A relatively good relationship between labor and management in Japan reflects the fact that their roles form well-integrated parts of an employment system.

5. Through the interactive effects of its working groups, job-related training, and ordered vertical mobility, the Japanese system generates "organization capital"; that is, an accumulation of characteristics embedded in an organizational network that influences worker productivity.

Ouchi (1981) suggests that the transformation of a North American firm to a Theory Z philosophy would take time. Some of the steps (not necessarily sequential) that you, as part of an organization, might take in this change process are as follows:

1. Understanding the Type Z organization and your role.
2. Audit your company's philosophy.
3. Define the desired management policy and involve the company leader.
4. Implement the philosophy by creating both structures and incentives.
5. Develop interpersonal skills.
6. Test yourself and the system.
7. Involve the union.
8. Stabilize employment.

9. Decide on a system for slow evaluation and promotion.

10. Broaden career path development.

11. Prepare for implementation at the first level.

12. Seek out areas to implement participation.

13. Permit development of holistic relationships. (pages 85-109)

The roles of the human resource developer in this process would be both a learning specialist and a consultant. In the latter role, the human resource developer must identify the skills and competencies that are required to facilitate organization development. American case studies provide insights into this process and the use of the "quality circle" as an intervention tool.

A Nordic model, which emerged through research with ailing industries in Lahti, Finland, furnishes another approach to participative decision-making. In this case study, the facilitator's role is filled by staff from the University of Helsinki's Open University. Organization development in this study is more accelerated than in some of the American case studies, because the very survival of the companies studied was at stake. Staff from the Open University not only assisted in establishing collaborative decision-making, but facilitated input from the Federal government, which gave funds to finance the project.

As adult educators, many of us have been deeply involved with service organizations, instead of working with business and industry. Human resource development in government, unions, and social service agencies will be explored through case studies which help identify the dynamics of fostering collaborative, democratic decision-making.

The implications of this research for adult education will be discussed. One interesting approach that closely relates these cases to adult education is Robert M. Smith's (1982) publication Learning How To Learn. It highlights such topics as learning styles, learning collaboratively, and designing training to help others learn how to learn.

References

Argyris, C. *Integrating the individual and the organization*. New York: John Wiley & Sons, Inc., 1964.

McGregor, D. *The human side of enterprise*. New York: McGraw-Hill Book Co., Inc., 1960.

Metcalf, H. C. and Urwick, L. *Dynamic administration: the collected papers of Mary Parker Follett*. New York: Harper & Row Publishers, 1940.

Ouchi, W. C. *Theory Z: how American business can meet the Japanese challenge*. New York: Avon Books, 1982 (earlier edition, Addison-Wesley, 1981).

Smith, Robert M. *Learning how to learn: applied theory for adults*. Chicago: Follett Publishing Company, 1982.

SYMPOSIUM

ADULT LANGUAGE LEARNING: NEEDED RESEARCH FOR ADULT EDUCATORS

Richard A. Orem, Chair*
Northern Illinois University

Judith Mastai
Simon Fraser University

Jean-Paul Hautecoeur
Ministere de l'Education
Montreal, Canada

INTRODUCTION

Adult language learning, as one subset of adult learning, has not been a popular topic in adult education research literature in North America. In fact, practically all research efforts in this area have been conducted by linguists and clinical psychologists following a developmental paradigm. In this paradigm, the researcher studies how children learn a first language and applies this knowledge directly to an understanding of how adults learn a second language. Adult literacy instruction provides a more specific example of this dilemma. Adult literacy programs have tended to develop models of instruction based largely on models applied to children learning to read. Now a third population of adult language learners has posed an even more complex problem for adult educators. This third group is the limited English proficient adult who is illiterate in his first language and who is suddenly faced with the prospect of having to learn to read and write English as a second language.

The purpose of this symposium is to present from three different North American perspectives an agenda for needed research in adult language learning by and for adult educators. The three perspectives include needed research in second language English literacy from a United States perspective, needed research in adult second language learning from an English-speaking Canadian perspective, and needed research in first language literacy from a French-speaking Canadian perspective.

RESEARCH IN SECOND LANGUAGE LITERACY: A UNITED STATES PERSPECTIVE

Recent waves of immigrants to the United States, specifically within the last 10 years, have included a growing number of illiterate political refugees from Southeast Asia, Central America and the Caribbean basin, and Africa. These illiterate refugees are not only unlettered but unschooled. Yet, they often find their way to classrooms in the United States where teachers have few resources or little preparation for teaching literacy skills in a second language (English) to students who lack even basic literacy skills in their first language. To find solutions to the problems posed by these illiterate adult learners, the classroom teacher has most often looked at the literature of second language acquisition research. Recent models of adult second language acquisition have tended to focus either on the affective or the cognitive aspects of learning. Brown (1980) stresses the importance of sociocultural variables in understanding the language acquisition process. In Brown's model there are two concurrent lines of development, the linguistic and the cultural. According to Brown's hypothesis, "an adult who fails to master a second language in a second culture may for a host of reasons have failed to synchronize linguistic and cultural development" (p. 139). This model stresses the importance of a cultural "critical period" in the language learning process.

---

*Graduate Studies in Adult Continuing Education, 101 Gabel Hall, Northern Illinois University, DeKalb, Illinois 60115, U.S.A.

Another model of adult second language acquisition is the Monitor Model proposed by Krashen (1977). Krashen distinguishes between adult second language learning and second language acquisition. Basically, learning usually takes place in formal (classroom) settings. Acquisition occurs in informal ("natural") settings usually without the help of a designated teacher. The Monitor Model also helps to explain the major differences between the way children and adults acquire a second language. The adult language learner is more likely to make greater use of the monitor. Krashen (1981) claims that the acquisition-learning distinction proposed by the Monitor Model "helps interpret findings in all areas of second language acquisition research and practice" (p. 12). Krashen's model, unlike Brown's, does not explicitly try to link linguistic development to cultural development. Both, however, place great weight on an understanding of the cognitive development of the second language learner.

Cross-cultural studies of cognitive development represent another separate trend in the research relevant to literacy acquisition and to the improvement of instruction in the adult education classroom. Field research in developing countries by cognitive developmentalists has provided ample evidence that a person's native culture influences cognitive development as well as language development. Studies (Cole, Gay, Glick, & Sharp, 1971; Greenfield & Bruner, 1966) have attempted to discover the link between formal schooling and cognitive development in different cultural contexts. Olson (1977) theorizes that literacy biases cultures toward the development of formal reasoning systems. Moreoever, he concludes from his analysis of language and learning that "schooling, particularly learning to read, is the critical process . . ." in the development of certain reasoning skills in children and adults (p. 278).

The link between schooling, or formal educational processes, and the development of certain prerequisite cognitive processes appears to be one in need of further inquiry. A recent analysis (The World of Literacy, 1979) of world literacy campaigns identified as an issue to be resolved the question of "minimum threshold of education and/or schooling that guarantees (literacy) skills" (p. 8). The implications from the research cited above is that there is some kind of automatic development of logical reasoning resulting from the schooling process which is a prerequisite to the acquisition of literacy.

A second area for further study by adult educators and researchers in second language literacy, and related to the need for study of culturally determined cognitive processes, is the relationship of perceptual strategies employed by learners to differences in cultural backgrounds and the implications for instructional improvement. For example, some cross-cultural psychological research has identified links

between perceptual abilities and interpretation of visual symbols, or pictures. More sophisticated screening instruments need to be developed for use with non-English speaking students in literacy classes to identify possible variables in sensory perception which could be linked to first language differences or first cultural differences.

These are only a few of the research needs facing a growing number of adult educators who work daily with illiterates learning to speak, read, and write English as a second language. Frustration experienced by both teachers and students as seen in significant student attrition rates in these classrooms must be dealt with for the long term benefit of these new citizens and their chances for a more rapid and satisfying transition to a new way of life.

L'ALPHABETISATION DANS LE CONTEXTE QUEBECOIS

Les besoins de recherche en alphabétisation (langue maternelle et non pas langue seconde), dans le contexte québécois, peuvent être regroupés en trois ordres de priorités, selon leur origine, leurs objectifs et leur utilisation:

1) enquêtes d'envergure nationale pour la planification;
2) recherches spécialisées pour la connaissance et l'amélioration des pratiques;
3) recherches-actions pour une transformation plus organique des pratiques d'alphabétisation et de recherche.

J'évoquerai très rapidement les besoins en recherche pour la planification (domaine où je suis personnellement engagé). Je devrai malheureusement négliger tout le champ des recherches spécialisées, un champ indéfiniment extensible et donc trop vaste. Et j'insisterai, à la lumière de l'expérience québécoise, surtout sur les besoins en recherche-action, plus d'ailleurs sur ses aspects politiques que thématiques.

Deux types d'enquêtes sont prioritaires pour la planification de l'alphabétisation, dont l'urgence est ici accélérée en prévision d'une campagne nationale d'alphabétisation:

1) une enquête-terrain sur les degrés d'analphabétisme de la population adulte (les données de recensements de Statistiques-Canada, relevant seulement l'indice de scolarité, s'avèrent fort insuffisantes pour mesurer les pratiques linguistiques réelles de la population);
2) une evaluation, élémentaire mais systématique, des coûts, des personnels et des clientèles engagés dans les programmes actuels d'alphabétisation qui sortent de la phase d'expérimentation. La professionnalisation progressive, la croissance rapide des interventions et des coûts exigent qu'on fasse un bilan quantitatif et qu'on évalue le rapport social de ces investissements avant de planifier une opération de plus grande envergure ou campagne nationale.

L'expérience a montré que, pour l'alphabétisation de population les plus marginalisées (immigrants, zônes de pauvreté), les interventions populaires ou communautaires autonomes étaient les plus efficaces. C'est de cette base qu'il faut partir si l'on veut que s'opèrent des changements réels dans l'éducation des plus défavorisés qui forment majoritairement la classe des analphatètes. Cela suppose une déscolarisation de l'éducation des adultes, une déprofessionnalisation des interventions, un transfert des pouvoirs des institutions fortes aux

organismes populaires. Appliquees a la recherche, ces perspectives signifient reappropriation des budgets, des personnels, des definitions des besoins, des methodologies, des criteres de competence et de valeur, de la mise en marche des productions par les groupes. C'est un champ ou une conception de la recherche qui peuvent etre complementaires a la recherche specialisee, mais qui en pratique peuvent etre concurrents et antagonistes, tout specialement dans ce domaine de l'alphabetisation.

ADULT SECOND LANGUAGE LEARNING: A CANADIAN PERSPECTIVE

The appropriate choice of instructional techniques to facilitate second language learning has been an important educational problem during this century. In recent years, as growing importance has been given to international trade, to the multicultural basis of population and to increased support for refugees, the question of second language learning has also become an issue for economists and social planners. A relatively new academic discipline, language planning (Kennedy, 1982), is defined as, ". . . a government-authorized, long-term, sustained and conscious effort to alter a language's function in a society for the purpose of solving communication problems." (Weinstein, 1980) These purposes have been further elaborated by Rubin (1977) as including socio-politico-linguistic and non-linguistic, political ends as well.

The problem has been approached from a number of different points of view: developmental, comparing second language acquisition to first language acquisition by children; linguistic, searching for structural universals among languages; and functional, outlining the social functions of language; to name but a few.

Regardless of methodology, the question of facilitating second language learning has clearly become an international priority. For adult educators, it is a substantial issue which may be regarded from a number of points of view; at the policy level as "second chance" learning; at the professional level as "competency-based" instruction; but always as adult learning with a "self-directed" aspect.

This paper will present an application of an information processing model of learning (Gagne, 1975) to the question of second language acquisition by adults. It will particularly address the issue of "need" (Trim, 1973; Scovel, 1982) as a motivating factor and challenge a traditional view of language as construction by emphasizing a contractual-contextual account of communication stressing discrimination (Harris, Begg, & Upfold, 1980). Skill development in listening, speaking, reading and writing will be analyzed according to the construction/discrimination argument and methodological implications will be examined, especially those which promote active participation on the part of the learner during the rehearsal phase. Areas for further study will be identified.

REFERENCES

Brown, H.D. Principles of language learning and teaching. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1980.

Cole, M., Gay, J., Glick, J.A., & Sharp, D.W. The cultural context of learning and thinking: An exploration in experimental anthropology. New York: Basic Books, Inc., 1971.

Gagne, R.M. *Essentials of learning for instruction*. New York: Holt, Rinehart and Winston, Inc., 1975.

Greenfield, P.M., & Bruner, J.S. Culture and cognitive growth. *International Journal of Psychology*, 1966, 1(2), 89-107.

Harris, G., Begg, I., & Upfold, D. On the role of the speaker's expectations in interpersonal communications. *Journal of Verbal Learning and Verbal Behavior*, 1980, *19*, 597-607.

Kennedy, C. Language planning. *Language Teaching*, 1982, *15*(4), 264-284.

Krashen, S.D. *Second language acquisition and second language learning*. Oxford: Pergamon Press, 1981.

Krashen, S.D. The monitor model for adult second language performance. In M. Burt, H. Dulay, and M. Finocchiaro (Eds.), *Viewpoints on English as a Second Language*. New York: Regents, 1977.

Olson, D.R. From utterance to text: The bias of language in speech and writing. *Harvard Educational Review*, 1977, *47*(3), 257-281.

Rubin, J. Bilingual education and language planning. In B. Spolsky and R. Cooper (Eds.), *Frontiers of Bilingual Education*. Rowley, Mass.: Newbury House, 1977.

Scovel, T. Questions concerning the application of neurolinguistic research to second language learning/teaching. *TESOL Quarterly*, 1982, 16(3), 323-331.

Trim, J.L.M. Draft outline of a European units/credits system for modern language learning by adults. Committee for Out-of-School Education and Cultural development, Council of Europe, Strasbourg, May 22, 1973, CCC/EES (73) 9.

Weinstein, B. Language planning in francophone Africa. *Language Problems and Language Planning*, 1980, *4*(1), 55-77.

The world of literacy: Policy, research, and action. Ottawa: Canada: International Development Research Centre, 1979.

SYMPOSIUM

FROM BELIEF TO KNOWLEDGE ABOUT THE TEACHING OF ADULTS

Claude Touchette, Chair
Universite de Montreal

Hal Beder
Rutgers University

Natalino Carrea
Rutgers University

Kjell Rubenson
University of British Columbia

INTRODUCTION

Whether adults differ from pre-adults in ways which warrant teaching them differently is one of the fundamental issues in adult education. In fact it may be the fundamental issue, for if the answer to the question is negative there is little justification for ascribing adult education the status of a "field" or profession. The exhortatory literature on the issue is voluminous, the most notable spokesperson being Malcolm Knowles who has popularized the construct "andragogy" in justification of teaching adults differently from children. The basis for Knowles' arguments and for most others, however, rests in pragmatic and humanistic philosophy rather than in empirical research. Until recently, the question of whether adults differ from pre-adults in ways which warrant teaching them differently has gone unanswered. Recently two research groups, one at Rutgers University and one at the Stockholm Institute of Education, have started research comparing classroom teaching in pre-adult and adult education. The purpose of the symposium is to analyze the results from the two research groups and compare the theoretical frameworks in order to get a platform for future research.

THE RUTGERS STUDY
(Beder, Carrea)

The first Rutgers study (Beder and Darkenwald, 82) sought to determine whether teachers who taught both adults and pre-adults perceived learning differences between the two groups, whether they taught the two groups differently and what accounted for teaching differences identified. The study began with a grounded theory component in which 27 teachers of both adults and pre-adults were interviewed to ascertain whether they perceived learning and teaching differences. The great majority did, and the differences noted were organized into learning differences and teaching difference scales for a quantitative test.

The sample for quantitative treatment included 173 community colleges and public school teachers of both adults and pre-adults. Data were collected through survey. In regard to learning differences, teachers indicated that adults are more intellectually curious, concerned with practical implications/applications, motivated to learn, willing to take responsibility for learning, clear about what they want to learn and willing to work hard at learning. They are less confident in their ability and less emotionally dependent on the teacher than are pre-adults. All differences were statistically significant at the .01 level or better. In regard to teaching differences, when teaching adults, teachers use more group discussion, spend less time on discipline, vary teaching techniques more, give fewer directions, relate material more to life experience, structure instructional activities more loosely, adjust content in response to student feedback more often and provide less emotional support. All differences were statistically significant at the .001 level except varying teaching techniques which was significant at the .05 level.

Given that substantial teaching differences were found, the question of what caused them was raised. It was hypothesized that in order for teachers to teach adults differently than pre-adults, teachers would have to perceive that learning differences exist, believe that students who learn differently should be taught differently, and have sufficient institutional autonomy to teach accordingly. Furthermore it was hypothesized that the difference in age between adult and pre-adult students would affect teaching differences. The hypotheses were tested through multiple regression analysis, teaching difference being the dependent variables. Teachers' perception of learning differences accounted for 25 percent of the variance and had a beta weight significant to the .001 level. Belief that adults should be taught differently than children, and adult, pre-adult age differentials all had significant betas, and taken together the variables accounted for 40% of the variance. The findings are consistent with andragogy and represent a positive step towards verification of the concept's validity.

If there are differences between adults and pre-adults which warrant different teaching methods, and if the teaching methods warranted are consistent with andragogy, the question is raised whether training in andragogical principles will enhance the effectiveness of teachers of adults who are unfamiliar with these principles. Carrea, in a yet unpublished study, sought to provide the answer. The study commenced with the development of a nine hour training sequence focusing on the principles of andragogy as expressed by Knowles. Public school adult education teachers of diverse subjects were then randomly assigned to three groups. The first group, the treatment group, received the nine hour andragogical training in three three hour blocks. The second group, a placebo group, also met for nine hours in three hour blocks. They, however, were each asked to prepare a fifteen minute presentation on their "subject" which was delivered to the group. In this way teaching methods were simply recycled within the placebo group. The third group, a null group, received no training. Outcome variables included learner attendance rate and a measure of learner satisfaction administered during the last class.

An analysis of variance was then used to compare the three groups according to learner retention and satisfaction. Results indicated that training had a significant impact on retention $\underline{F}$ (2) = 2.3, p = .10, but failed to have a significant effect on learner satisfaction, $\underline{F}$ (2) = .23, p = .80. Constrasts (Duncan, range set at .10) indicated that the group receiving andragogical training had a significantly better retention rate than the group receiving no training $\underline{t}$ (58) = 2.2, p = .03, but did not have a significantly better retention rate than the placebo group $\underline{t}$ (59) = 1.0, p = .31. The results suggested that andragogical training may well affect such variables as learner retention, although the relationships found in the Carrea study were not substantial. Further research is warranted.

THE STOCKHOLM STUDY
(Rubenson)

Theoretical framework

The points for teaching adults differently than pre-adults rest mainly on assumptions about the characteristics of the learner and draw extensively on the literature on adult learning, development and socialization. The underlying assumption seems to be that the problems of curricula and teaching can be reduced entirely to psychology. However, the limitation of using developmental psycho-social theories as a starting point for looking at instruction is that the contextual factors (often called frame factors) that influence instruction, such as the subject matter, grouping of participants, available time, institutional customs and policies, and social structure of the institution are overlooked. Frame factors have in common that they set certain time and space limits for that part of the educational process which takes place at "school" (Dahllöf, 1969). According to Lundgren (1977) the educational process is governed, constrained and regulated in the following way:

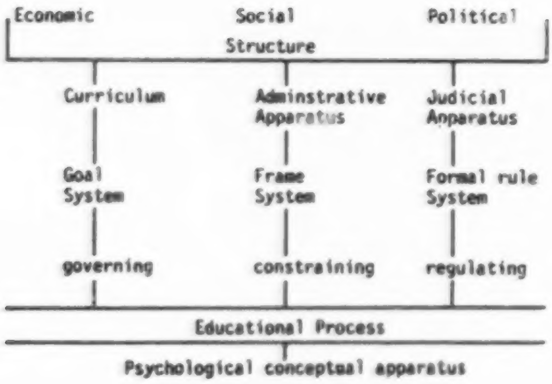

Economic
Social
Political
Structure
Curriculum
Adminstrative Apparatus
Judicial Anparatus
Goal System
Frame System
Formal rule System
governing
constraining
regulating
Educational Process
Psychological conceptual apparatus

Figure 1

According to the above model, which formed the point of departure for the present study, the teaching of adults cannot be understood solely by looking at the participants' psychological conceptual apparatus (the characteristics of the adult). As implied in the model, the conditions in which the participants and instructors operate will have a direct impact on the structure, content and function of the process of instruction.

Research group and data collection

The study presented here was part of a larger project on "The Teaching Process in Adult Education" (US-VUX). The results presented here are based on an intensive part of the project which involved nine classes in Swedish and nine in mathematics (grades 7-9) at Municipal Adult Education. The study used classroom observations (240 lessons), tape recordings (30 lessons), questionnaires and interviews. In another part of the project, the extensive one, a representative group of instructors having similar classes received a questionnaire by mail dealing with the teaching process. The data was collected in such a way that it was possible to compare the results from US-VUX with similar data collected from a large study on the teaching process in high school.

Results

Table 1. Use of various teaching methods. Percentage distribution of time spent.

	Mathematics			Swedish		
	Adult E observation (N=4790 min.)	Adult E instructor question. (N=150)	High Sch instructor question. (N=240)	Adult E observation (N=4744) (min.)	Adult E instructor question. (N=127)	High Sch instruct. question. (N=230)
Review of homework	3	10	11	11	9	13
Teacher presentation	54 → 81	30 → 80	38 → 85	39 → 63	10 → 52	25 61
Guided practice (common assignments)	24	40	36	13	24	23
Group work (incl. presentation)	1	5	2	14	19	22
Discussions	3	5	7	18	10	9
Individualized instruction	15	10	5	5	10	7
TOTAL	100	100	100	100	100	100

From table 1 it appears that the teaching process in Municipal Adult Education and High School looked very much the same - especially in mathematics. 80 per cent of the time in mathematics was spent in traditional classroom instruction (review of homework, teacher presentation and guided practice). This may not be so remarkable in view of the structure of the subject. It is maybe more surprising that according to the observation data traditional classroom teaching represented 63 per cent of the time in the adult education Swedish classes.

Besides looking at the general design of the teaching process, an attempt was made to analyze its structure. This was done by classifying the 30 tape recorded lessons using Bellack's system. The system, which by analogy with a game talks about moves, consists of the following four categories: 1) structuring moves (STR) serve the function of setting the context for subsequent behaviour, 2) soliciting (SOL) which is intended to elicit a verbal or non-verbal response, 3) responding moves (RES) bear a reciprocal relationship to soliciting and occur in relation to them and 4) reacting moves (REA) are occasioned by the three other moves but are not directly elicited by them. Bellack's system has been used in connection with Swedish research on the teaching process in high school as well as primary education (Lundgren, 1972; Gustafsson, 1977). The results from these studies were compared with the Bellack analyses of the data from Municipal Adult Education (Table 2).

Table 2. Moves in percent divided between teachers' (T) and participants' (P) different educational levels (Bellack system)

	Math High School		Math Primary Education		Math Adult Education		Swedish Adult Education	
	T	P	T	P	T	P	T	P
STR	16	1	17	1	42	14	37	24
SOL	41	10	45	21	28	16	29	15
RES	5	61	7	46	3	36	6	40
REA	34	28	29	26	27	34	27	20
ISO*	0	0	0	6	0	1	1	0
N	7051	4336	4496	3081	4724	2716	2483	1603

*Impossible to interpret

What is most striking is the domination of structuring moves in adult education in comparison with pre-adult education. This activity refers mainly to lecture behaviour from the actors. The soliciting activity is, however, slightly lower in the adult education setting, which means that the teacher put fewer questions to the participants compared with their colleagues in youth education. The adult students have a relatively high amount of reaction moves which, in combination with their high amount of structure moves (14%), indicates a different way of acting compared with elementary and high school pupils.

The results from this study indicates that the instructors in Municipal Adult Education were very eager to cover as much as possible of the syllabus, and in doing so they had to rely on traditional classroom teaching and mainly structuring moves. This is not in accordance with andragogical principles. The findings cannot be explained by the instructors lack of knowledge of these principles. In fact, the instructors own philosophy on how to teach adults and teaching in general had only limited impact on the actual teaching process. The explanation as to why the participants in Municipal Adult Education "let" the instructors become "living books" and the latter accepting this role is to be found in the factors that govern, constrain and regulate this kind of education. There was limited time for the instructors to accomplish a given set of goals, the existance of an evaluation system according to which the instructor had to make a differentiation between students and participants who were trying to respond to society's merit system. This "joining" of the actors' psychological conceptual structure and a pedagogical conceptual structure to explain educational processes has been the central idea of the Stockholm study.

References

Beder, H.W. & Darkenwald, G.G. (1982). "Differences Between Teaching Adults and Pre-adults: Some Propositions and Findings." Adult Education, 32:3, 142-155.

Dahllöf, U. (1969). Ability Grouping, Content Validity and Curriculum Process Analysis. Göteborg: Institute of Education, University of Göteborg.

Gustafsson, C. (1977). Classroom Interaction. Lund: Liber.

Lundgren, U. (1972). Frame Factors and the Teaching Process. Stockholm: Almqvist and Wiksell.

Lundgren, U. (1977). Model Analysis of Pedagogical Processes. Lund: CWK Gleerup.

END

U.S. DEPT. OF EDUCATION

OFFICE OF EDUCATIONAL
RESEARCH AND
IMPROVEMENT (OERI)

ERIC

DATE FILMED

OCT. 1 .1986